ARCHITECTURAL TYPOLOGY OF MESOPOTAMIAN CIVILIZATION FROM ANCIENT CULTURAL MYTH

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ARCHITECTURAL TYPOLOGY OF MESOPOTAMIAN CIVILIZATION FROM ANCIENT CULTURAL MYTH

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Endings do not mean anything to me because I am really interested in beginnings. So, I find that existence is the most difficult term I have ever dealt with, in spite of my fondness and interest in philosophy which I began my journey with which since the early stages of my life. When I woke up to find myself fully attached with the passion in philosophy beginning from Socrates until Jacques Derrida. The interest and infatuation drew me to the interest in cultural products, while thinking of the moment of the beginning.

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TABLE OF CONTENTS

CHAPTER ONE
INTRODUCTION

Table of Contents

CHAPTER TWO
ROOT OF TYPE

Table of Contents

CHAPTER THREE
METHODOLOGY: THE THEORY OF ARCHITECTURAL PROTOTYPE

Table of Contents

CHAPTER FOUR
THE CASE STUDY

Table of Contents

CHAPTER FIVE
CONCLUSIONS

Table of Contents

LIST OF TABLES

Chapter One

Chapter Two

Chapter Four

Chapter Five

LIST OF FIGURES

Chapter Three

Chapter Four

Chapter Five

LIST OF DIAGRAMS

Chapter One

Chapter Two

Chapter Three

Chapter Four

**All the tables, figures and diagrams are by the writer except as indicated.*

TIPOLOGI SENI BINA MESOPOTAMIA DARIPADA MITOS BUDAYA PURBA

ABSTRAK

Beberapa fakta dapat dijelaskan secara subjektif namun sukar untuk dibuktikan secara objektif, situasi ini membuatkan beberapa ahli falsafah sebelum Socrates menyingkir fakta logik dalam menterjemahkan alam fizikal disekeliling mereka. Persoalan diantara subjektif dan objektif adalah daya yang mendorong kita untuk mengekalkan dimensi simbolik budaya dan produk senibina Mesopotamia. Kepentingan persembahan teori senibina adalah berkaitan dengan persekitaran fizikal dan metafizikal yang membentuk identiti budaya kontemporari. Persoalan terkemuka dalam masyarakat senibina kontemporari Mesopotomia di Iraq berkait rapat dengan pembentukan asas identiti budaya dengan mengutarakan kepentingan kajian yang lebih fokus kepada budaya persekitaran Mesopotomia.

Tiada tamadun yang lebih tua dari Mesopotomia, produk budaya dan senibina masyarakat ini telah melepasi reruang dan denah secara meluas namun sukar untuk menonjolkan diri dan sukar untuk mentafsirkan ekspresi mental disebalik ekspresi kebendaan. Perihal daripada itu kekaburan berlaku berhubung dengan persoalan pokok tentang ilmu ke atas ekspresi senibina.

Kajian ini berputik dengan mengambilkira produk budaya dan senibina yang merupakan sebahagian dari perspektif falsafah. Justeru itu, eksplorasi inteletektual senibina prototaip membentukkan aras abstrak yang berhubung kait diantara ekspresi mental dan ekspresi senibina. Penyelidikan ini berbentuk fenomena tanpa diketahui, maka metodologi digunakan berasas kepada laluan spesis budaya abstrak.

Perihal dari itu, kajian ini mengadaptasikan teknik analisis struktur dengan mengambilkira akar umbi budaya Mesopotomia untuk memahami ekspresi mental. Ekspresi ini diwakili oleh mitos Mesopotomia yang berpaksi kepada asal usul, penilaian dan organisasi. Kedua, kajian ini mengadaptasikan analisis geometri untuk menentukan struktur ekspresi senibina yang diwakili oleh simbol dalam senibina seperti kuil dan istana.

Dengan ini, masyarakat Mesopotomia mengetengahkan geometri sebagai teknik untuk menghasilkan produk tanpa mengambilkira kaedah matematik yang komplikated. Hasil dari kajian ini, kesimpulan boleh dijelaskan seperti berikut:

Pertama, pembentukkan mitos Mesopotomia merupakan roh yang mendominasikan kesemua produk budaya yang terhasil dari idea kolektif spesis budaya dan senibina. Justeru itu, struktur mental dan ekspresi senibina diintegrasikan dalam tamadun Mesopotomia sebagai sebahagian dari keseluruhan; awam dan persendirian; masa dan lompang; yang terdapat pada pandangan manusia termasuk perkara-perkara tersebut.

- Asal usul perhubungan diantara manusia dengan alam semesta
- Rentetan perhubungan diantara suci dan tidak suci
- Putik perhubungan diantara kebendaan dan bukan kebendaan yang merupakan dogma metafizikal untuk percantuman kewujudan sumber.

Kedua asas komprehensif dalam teori senibina seharusnya dibentuk dalam perspektif budaya dimana produk budaya dan senibina dihubungi oleh :

- Semangat jangka waktu dan spesis budaya yang dapat dikenali berasaskan konsep prototaip senibina.
- Prototaip senibina adalah konsep budaya untuk menjelaskan pemikiran kebudayaan dan kepercayaan disebalik budaya dan produk senibina.
- Produk budaya dan senibina dipengaruhi oleh konsep falsafah yang diwakili oleh budaya yang unggul dimana produk ini kekal sepanjang masa.

ARCHITECTURAL TYPOLOGY OF MESOPOTAMIAN CIVILIZATION FROM ANCIENT CULTURAL MYTH

ABSTRACT

Some facts can be easily inferred subjectively but difficult to prove objectively, thus causing the philosophers who came before Socrates to deviate from logic in interpreting the nature of the physical world around them. The dialectic between subjectivity and objectivity is the force that motivated us to restore the symbolic dimensions of Mesopotamian cultural and architectural products. The most important theoretical presentations of architecture are those that deal with the metaphysical and physical environments, which together form the contemporary cultural identity. The most important dialectics in contemporary architectural society in Mesopotamia–Iraq are related to the importance of formulating the basis of cultural identity by highlighting the importance of studies that focus on the Mesopotamian cultural environment.

No civilization is older than Mesopotamia, and the cultural and architectural products of this society have extended spatially and temporally but are incapable of speaking for themselves, which lends difficulty to understanding the interpretations of the mental expressions that stand behind the material expressions. As a result, a kind of ambiguity exists about the nature of knowledge relative to its origin in terms of the reflection of mental expressions on architectural expressions.

This study sets off from a consideration of cultural and architectural products as part of the philosophical perspective. Therefore, the intellectual exploration of the architectural prototype appears to be the abstract level that is connected to mental expressions on one hand and architectural expressions on the other. The inquiry is phenomenologically unknown; thus, a methodological inquiry was applied by based on the path of formation comprising the spirit of the age and the path of abstraction comprising the cultural species.

Thus, this study first adopted the structural analysis method considering the nature of the Mesopotamian cultural core to identify the structure of its mental expressions. Such expressions are represented by myth of creation in Mesopotamia, which is based on the structure of origin, evaluation, and organization. Second, this study adopted the geometrical analysis method to determine the structure of the architectural expressions, which are represented by symbolic architecture, temples, and palaces in Mesopotamia based on the structure of the whole–part, public–private, and mass–void.

Thus, the man of Mesopotamia found geometry to be the optimal method to form his product without resorting to the use of complicated mathematical calculations. The following conclusions can be drawn:

First: The Mesopotamian myth of creation is the primary soul dominating all cultural products, as represented by the idea of the collective cultural and architectural species. Thus, the structures of mental and architectural expressions are integrated in Mesopotamian civilization, where the whole–part, public–private, and mass–void relationships reflect the man's view toward the following points:

- Origin of relationship between himself and the universe;
- Sequence of the relationship between the holy and unholy; and
- Nature of the relationship between the material and immaterial, which became a metaphysical dogma for the unity of the existence source.

Second: A comprehensive base for architectural theory should be constructed within the cultural perspective, where:

- Cultural and architectural products connected with the spirit of the age and the cultural species can be identified based on the concept of architectural prototype;
- Architectural prototype is a cultural concept for expressing the cultural thoughts and beliefs behind the cultural and architectural product, which will remain in effect in the future; and
- Cultural and architectural products are affected by the philosophical concept represented by the supreme cultural ideal, which make these products constant across space and time.

CHAPTER ONE

INTRODUCTION

1.0. Introduction

The concept of architectural prototype defined as an early sample or model built to test a concept. The word prototype derives from the Greek (prototypon) "primitive form", neutral of (prototypos) "original - primitive" from (protos) "first" and (typos) "impression" (Etymology Dictionary: 2009).

The concept represents one of the most important constructional bases of the architectural cultural products, as it represents the abstract level related to the core that forms the architectural product on the one hand and the product itself on the other. It has a deep level of perception, constituting the basic grammars and the internal system of the architectural cultural product.

Thus, the concept represents one of the methods through which we could explain the architectural product by: its metaphysical essence which we reason, and the physical which we perceive, then we give it a physical formation - the architectural prototype - which reflects the values of signifier and signified, that are formed by values that represent higher existentialism for man which is reflected in his cultural and architectural products.

Therefore, the extraction of the architectural prototype is gaining a critical importance as it forms a method to rooting the historical architectural and cultural products, through realizing the way of implying the extracted intellectual principles of culture in its architectural products.

The concept of architectural prototype is considered one of the prominent concepts in the theory and history of architecture from the age of pre enlightenment

to post modernism. The significance of this concept lies in its close relation with the concepts of particularity and originality. The concept of prototype is related to the shape of the architectural cultural product on the one hand and with its content on the other, giving an interpretation for the real reasons behind the use of mental expressions structure reflected in certain architectural expressions structure in the architectural product exclusively.

The traditional concept to explain the architectural cultural product that leans on components such as order, arrangement, symmetry, and economy established by Vitruvius[(3)] two thousand years ago and which remained the base for all the theories and the architectural movements over history is changed today.

Today, we find that many theorists in the field of architecture and its history believe that the focus on the aforementioned factors and components is insufficient for building a comprehensive framework, through which the contemporary or the historical architectural cultural products could be interpreted. Therefore, it must be done within the cultural view or the cultural environment[(4)] i.e. taking into consideration the cultural conditions as being a basic and important factor in studying the cultural product. This consideration is given for its active role in affecting all the culture's components and products starting from the intellectual and the knowledge structure of the society and ending with the individual which constitutes its cultural architectural particularity.

The most important presentations in the theory and the history of architecture, that tackle the role of the cultural environment and its impact in explaining the architectural cultural products, are the presentations which deal with concepts like the spirit of the age and the cultural species. These ideas relate with two kinds of factors which are:

- First: Factor resulting from the world of mental[5] which is related to the metaphysical environment.
- Second: Factor resulting from the world of material which is related to the physical environment.

These presentations show that the cultural product of a certain civilization reflects these two factors, and show its direct relationship with them. In addition, the study and analysis of cultural products, just as the architecture, should take these factors into consideration and should focus on the potentiality of man to express his existence because the cultural architectural product is a social act which can never be separated from any order or scheme that can be found within it. Furthermore, it is difficult to imagine the society in any civilization without common ethical beliefs or part of a group of concepts that show how the mechanism of existence operates.

Studies that tackle the role of perspective - cultural environment suggest a new concept to deal with the cultural product in general and the historical product in particular, and this concept rests on searching for the rules and grammars that cause the formation of the product exclusively, as it views the relationship between the cultural products and the society as a production relationship, not as a relationship of change, because the civilization imposes very special requirements on the process of the cultural production.

Therefore, we see that certain elements like the material and the technique are limiting and they contribute in the formation of - temporary - product, while the other elements like philosophy, knowledge, scientific knowledge, theological methodology and myth usually encroach upon the limits and lead to the formulation of - permanent - product. Therefore, the process of explaining the cultural product must take that into consideration.

The question about the interpretation of cultural architectural product nowadays is considered a central question in the social and anthropological[6] fields. This is so despite the fact that these fields are not concerned with how the cultural architectural products are made, but they interpret the phenomena that stand behind them.

In an attempt to identify the reason behind the possession of these architectural products which were made by a certain civilization - though they are made in different times and places and by different people - many in particular, share similar traits and qualities. Based on this we can say that they share the same primary soul or core.

This soul - core - controls and guides the cultural product including religions, doctrines, philosophy, science, literature, art and architecture, i.e. there is a mental correlation within the single civilization and that provides its architectural products with originality and integration, making them tend to use special structures for their mental expressions which are reflected with a structure that limits their architectural expressions. All this might make what seems to be sound and natural in a certain civilizations but wrong in another civilization.

So it is impossible to realize the originality of the architectural product, i.e. interpreting the real reasons behind using particular architectural expressions by improvising an interpretation of the cultural heritage (especially architecture) of a certain society, disregarding the originality of its legacy components and cultural traditions through its perspective - cultural environment, because the only result of this attempt of interpretation is merely a destruction of the truth.

What has been previously mentioned shows that the studies that interpret the cultural architectural products through their formational bases and their perspective -

cultural environment create a history to their meanings and entity, a goal for their existence and the reality of their existence. This is done in terms of the bases from which the mental product - theory - and material product - application - of any civilization, and looking for the manner in which they correspond, giving the interpretation behind the reasons of thorough inclusion in the architectural products and eventually diagnosing the cultural originality of the architectural product.

This cannot be done except by identifying and detecting the items, tools and concepts that do that. So the study of the prototype in any historical architectural phenomenon is an important issue as the concept enjoys essential characteristics that relate it to the thought and the architectural cultural application. Hence the importance of the study manifests in identifying the prototype in the cultural architectural product in general and the Mesopotamian product in particular.

1.0.1. The Importance of the Study

The importance of this kind of studies comes from two points:

- First: Is represented by the general importance of the role of studies that tackles the cultural environment in general and interpreting the cultural architectural products through the reflection of the mental product represented by the core of the cultural product on the material product represented by the cultural product itself, through the architectural prototype.
- Second: A special importance represented by manifesting the role of studies that tackle the Mesopotamian cultural environment in particular, in interpreting the Mesopotamian architectural cultural products, through revealing the reflection of the mental product represented by the core of the cultural product on the material product represented by the product itself,

through the architectural prototype. Where, the Mesopotamian mental product involves the essential aspects of human life and related to the cosmological with focusing on the earlier fundamentals of the universe, which represented by Mesopotamian myth of genesis or the primary soul of culture. Moreover, myth of creation is dominating all the material products which characterized by the idea of creating the common cultural species. In this context, we can diagnose two main trends:

First: The Sumerians-Akkadians' trend or Gilgamesh: the legend of genesis.

Second: The Babylonians-Assyrians trend or Enuma Elish: the legend of genesis. Where myth refers to the human desire in maintaining a kind of the collective memory, which makes his existence in this world full and meaningful. Therefore, myths provide man with a historical memory that makes him feel that his life has a justified existence. Mythical history doesn't pay attention to anything other than the events resulting from the interrelation of the worlds of Gods and human. So, From all the Mesopotamian kings, Gilgamesh, the king of Uruk, is the only king who was preserved in the memory and who was immortalized by the myth and not by history, because the historical persons and events do not deeply root in the collective memory of man but for a short time and then they vanish and change as a result of the myth. So, the myths of Gilgamesh and Enuma Elish are not merely a narration of a symbolic story, because it is a garment carefully chosen by the savage mind for the abstract. So, the mythological image cannot be separated from the thought. Therefore, we should take the myths of Gilgamesh and Enuma Elish seriously because it is a kind of mental explanation-mental product reflect on the material explanation-material product, and this

represents the essence of the cultural and architectural production process which is characterized by originality, particularity and permanency.

This accomplishes the particularity - contemporary cultural architectural identity related with the Mesopotamian cultural product through its perspective - cultural environment, in the time in which it is considered problematic to accomplish the particularity - architectural identity which is the most important problem in the theory and history of architecture in general and in the theory and history of architecture in Iraq in particular.

This is consistent with the most important dialectics in the contemporary architectural society in Mesopotamia or Iraq[7]today.

The Dialectics are related to the importance of formulating the contemporary cultural identity which was a reaction to what have been produced by the architectural theories and practices, alien from cultural identity or the local, which don't recognize the cultural identity in Iraq including mental and applied distortions that excluded the contemporary architectural product from its historical and cultural depth.

1.0.2. The First Central Question of the Study

In philosophy, thought and knowledge, the questions are usually more important than the answers - questions that might have the possibility of having other answers and remain the starting point of all the kinds of knowledge. So, there was a need to pose the first central question:

What is the nature of the knowledge related to the originality of the Mesopotamian cultural architectural products in terms of the reflection of the mental product -the mental expressions structure- represented by the core of the

Mesopotamian cultural architectural product on the material product -the architectural expressions structure- represented by the architectural product itself, within its cultural environment which formulate the particularity - contemporary cultural architectural identity related with the Mesopotamian cultural product?

Chapter One is designed to define the special cognitive reality related to the first central question, done through Three Sections.

Section One involves an introduction of the cultural environment in the theory of architecture in general and in the history of architecture in particular, in order to provide the background knowledge of the importance of those studies. Section Two involves an analytical vision of a group of studies which dealt with the systems of studying the history of architecture in general to provide the cognitive background of the systems, through which the classification and analyses that deal with the historical, cultural and architectural product. Section Three includes a review and analysis of several studies which tackle the Mesopotamian cultural products in particular, in order to provide the cognitive background for the nature of knowledge that is related to the originality of the Mesopotamian architectural cultural products; and in this section the problem of the study and the objective were identified.

1.1. The Cultural Environment - Cultural Heritage in Architecture

The difference between the past and the present is how we look to things. Everywhere in the historical cultural products, we find a relationship among them in terms of harmony, balance, hierarchy and proportionality compared to the present products where such a relationship is not found and that might make them seem deconstructed, ugly, dull and giving an impression of non - realism. Principles that are rooted in the harmonious design are found everywhere and every time before our time and our place as they are rendered as a historical convention.

Cultural heritage is mean by which culture is passed from one generation to another. Losing this means might mean losing a basic and a significant part of our culture components and that the departure from this heritage is fraught with danger because it means losing steering and points of guidance and that an artist's or an architect's departure from heritage might lead to a departure from the society and its orientations (Greenberg: 1988: 40).

Some look at the cultural heritage as a calling for the past and the present into a direct visual relationship, thus the cultural heritage is the spirit of age and that traditions and cultural heritage could be renewed by someone who is able to interact with it and that the artist's value lies in believing in his cultural heritage more than his desire to revolt and rebel against it (Johnson: 1994: 280:281).

The cultural heritage is an admission or a knowledge reference in the shape of facts, beliefs, opinions and norms over time, which can be backed up and consolidated such that they become unchangeable by constant use and wide diffusion. The power of cultural heritage lies in its self - promotion and could be converted into an effective dynamic power which is evidently demonstrated in the oriental Chinese and Japanese architecture. So, for architecture, the cultural heritage

has an effect on human and this effect is spiritual, not physical (Johnson: 1994: 281:282).

Charles Correa (1930) the Indian architect, planner and activist said that the most important component of architect is self - confidence, because it allows the architect to deal with his reality in a distinctive way. The architect maintains his cultural heritage and deals with it and in the meantime interacts with the changes that are required by the contemporary life (Correa: 1993: 80).

History cannot be separated from culture and cultural heritage or from the cultural personality. And in the perspective of dealing with culture heritage it can be said that architects are divided into two groups; the first believe that they are an episode in a series of concepts and historical facts. Therefore, they see history in a cylindrical twisting and one-sided view. They are the rendered as the realistic idealistic group of architects foremost those belonging to the modern movement(8).The second group is those who appeal to changing and modifying historical antecedents and events, see history as a history of changes and believe in the multiplicity of views and attitudes. They are the pragmatic empirical architects who were emulated by postmodernism(9) architects (Johnson: 1994: 284)(Jencks: 1991: 11).

The experimentalism(10) and rationalism(11) are the base for the theory of epistemology(12) which is essentially a branch of philosophy that studies the nature, sources, methodologies and knowledge boundaries, as it constitutes a basic and significant aspect of the human intellectual structure, which is reflected on the thinking and on the form of his cultural structure. The basic difference between both methodologies relies on their attitudes towards knowledge literature. The experimentalism is based on regarding experiment as the base of true knowledge and

denies any a priori knowledge, yet considers that the whole knowledge is a posteriori comes from the senses in a form of direct or indirect observation (Al Azzawi: 1999: 1).

Locke, the English philosopher and physician, widely known as the father of liberalism, considered mind at birth is only a white page where the experiment maps out the whole knowledge about the external world, whereas the methodology of rationalists depends basically on believing that mind is able to reach the absolute definite knowledge separately from experiment via relying on the primary inherited intellectual knowledge. Thus, mind amongst rationalists is the base of knowledge (Al Azzawi :1999: 2)(Gelernter: 1995: 130).

1.1.1. The History

The idea of dealing with cultural heritage in the knowledge perspective is basically based on the attitudes toward history and understanding it. As for experimentalists, they call for continuity with history and cultural heritage, seeing continuity as a materialistic physical continuity. Experimentalists had the cognitive experiment as the base of knowledge, relying on passions and feelings as a means of continuity and a means for agitating senses visually (Al Azzawi: 1999: 4).

However; rationalists call for departure from history and halting it since knowledge is considered a separate construction not a linear or a pyramidal one, as well as the possibility of beginning from the zero point or turning point , relying on voiding thinking from stains and impurities represented by the inherited traditional values (Al Azzawi: 1999: 7).

Although separate from history and cultural heritage, rationalism in fact aims at mental continuity of absolute and inclusive historical concepts and values, and the

experimentalists and rationalists' points of view have made us go into the concept of history and historicism[13]. Historicism is the philosophical methodology that is based on the principle of percept things and phenomena in terms of their emergence and development and their relationship with certain historical conditions they defined and how they reached the present state (Rosental: 1974: 131).

Historicism constitutes an important and a complementary aspect in the controversial methodology, which developed particularly in Marxism[14] and became the base for Karl Marx's theory of social development whose most significant presentations is having faith in the historical determinism and prediction potentiality in human history (Popper: 1988: 131).

So, history searches within the boundaries of the past and studying history has a relation with details, whereas philosophical history searches for principles and roots in an attempt to rest on the past to understand the present and exploring the future.

Ibn-Khaldun, the Tunisian historiographer and historian and sometimes viewed as one of the forerunners of modern historiography, sociology and economics stated that history's transition into history philosophy is a transition of the general to the special and the part to the whole, the material to the immaterial and the embodied to the abstract which is an ascendance from reality, sensed partial material phenomena and experiments into studying the principles, fundamentals and the general rules that dominate them (Ibn-Khaldun: 32)(Mushtak: 1984: 64:65).

Studying history - namely the history of Mesopotamia culture - should be handled from a philosopher or an analyzer's perspective, not from a historian's perspective, because a historian examines phenomena, compares narration, criticizes literature, scrutinizes facts and differentiates them with a mentality of an examiner

researcher. A philosopher, however, analyzes the motives, objectives, reasons and the conditions, then extracts lessons and rules until he comes to a reasonable evident interpretation; which means that the results of the former are the latter's preludes and hypotheses. A historian yields facts and a philosopher analyzes them resulting in logical interpretations (Ibn-Khaldoun: 32).

Giedion a Bohemia, born Swiss historian and a theorist in architecture history suggests that the study of history is not a process of fact collecting, but it is a scrutinized internal view into the dynamics of the process of life (Giedion: 2003: 15).

1.1.2. The Crises of History

What has been mentioned is what has created the crisis of history in architecture theory due to those who dealt with the history of architecture not realizing their boundaries as historians or theorists having the spirit of philosopher in handling historical architectural cultural manifestations in the light of epistemology theory, as this crisis is relatively new and came to light since the appearance of the idea of teaching architecture as an academic course. In 1715 Jacques Francoise Blondel (1705 - 1774) a French architect founded a school for architecture and composed a course for teaching history of architecture which he called Architecture Francoise which was considered from the point of view of modernism architects, the beginning for the rise of revivalism in architecture. Yet, their critics consider it a step backward for the architectural values and architecture development (Collins :1965: 1:2).

The concept of historicism was known in the architectural thinking of the 17th century. Yet, cultural values for them are derived from the natural laws and the value of history in that it presents the evidence on the presence of those manifestations.

Good architecture is subdued to those laws, while, in the 18th century architecture, return to classic was always associated with nostalgia(15) and the poeticism of its architecture (Colquhoun :1996: 203:204).

Sibyl Moholy-Nagy (1903 - 1971) an architectural and art historian maintains that the most prominent problem that rose in the 18th century is that the historical knowledge of building became a descriptive and a picturesque one and care for style and façade values of the building emerged without focusing on its other inherited values and dimensions. And not long before this period, architecture continuity was occurring as a Phenomenalism(16) a process within the architecture developing series since prehistory ages (Moholy-Nagy: 1965: 1).

Whilst the French school beaux - art(17) went since mid of the 19th century on teaching architecture in conformity with an academic course based on intensive study of architecture history, styles and reproducing them by following its concepts cohesively and strictly. On the other hand, the bauhaus(18) prevented the teaching of history believing that it would participate in an architectural buildup with an opened mentality void of impurities imposed by norms, traditions and historical accumulations (Collins: 1965: 40).

On the other hand, the 20th century witnessed radical significant shifts in the field of thinking, architectural practice, attitude toward history and continuing with the history. The first half of the 20th century has witnessed the rise of the modern movement with its rationalism stances calling for departure from history in which history was regarded as doing wrong to architecture and killed its spirit of creation (Moholy-Nagy: 1965: 40).

Modern movement has considered knowledge as a separate construction always imposing a return to the starting point to purify the mind from the incorrect

inherited values and hypotheses. This has been shown in architecture through applying high geometric utopian basic forms in planning and designing as a result of certain intellectual attitudes, the most important of which is the separation of the part from the whole and the individual from the group and the building from for the urban context, the halting of history and imparting new cultural values on the added part (Al Azzawe: 1999: 9).

Modernists called for an international architecture style aiming at unifying the world in an integral way where differences between nations disappear, generalizing the greatest impact in the western lifestyle and other similar statements by modernism proponents to justify their desire in dominating the world (Brolin: 1976: Introduction).

As for the radical shift, it has appeared first following the 2nd world war as a reaction to modernist architecture and its inhuman characteristics. The second was as a result for the devastation caused by war throughout Europe. The reconstruction of those cities awakened the feeling of the importance of architectural and cultural heritage of these countries as well as continuity with this heritage and reviving it; and this architecture was based on a core whose base is multiplicity - pluralism - and complexity (Jencks: 2006: 57).

The last quarter of the twentieth century is the age of intellectual, architectural and cultural multiplicity. There was no longer one dominant universal thought, but a mixture of several thoughts, beliefs and orientations and the new world-view has become dependent on the growing understanding of that multiplicity - Pluralism (Jencks: 1991: 10).

Post modernist architecture has relied on basic values, the most important of which is the role of memory and history as positive values in invention. Post

modernist architecture has been charged as a new elective architecture or the new eclecticism[19] owing to reliance on direct historical metaphor and as hybrid architecture. It relied on paradoxical dualism as well as linguistic denotations of the double codes. Its language is a mixture of modern techniques such as constant modernism and from old fashions as constant past (Sanderson: 1981: 22) (Jencks: 1986: Intro.).

And we find that the call for post modernism in studying the architectural history - re-exploring it - appears in the intellectual presentations of the pioneers and theorists of this movement since the 1960's. Philip Cortelyou Johnson (1906 - 2005) was an influential American architect though is considered one of the most prominent modernism architects, he has adopted in the early 1960's a supporting attitude to re-exploring the architectural history. This orientation has deepened in what was called the first generation of post modernism architecture and the historical era not in terms of philosophical concept but in terms of the historical metaphor (Jencks: 1991: 66).

1.1.3. The Power of History

Today, the power of history has made Charles Alexander Jencks (1939) the American architectural theorist, who stated in one of his articles in 1975 entitled The Rise of Post Modern Architecture that any of the movements of a historical nature - historical movement - that have risen in the 1960's was not able to create a wide mass ground like that created by the modern architecture movement at its climax. In the sixth edition of his book entitled The Language of Post-Modern Architecture in 1991, Jencks reconfirms that postmodern architecture in the second half of the 1980's was able to shift into an architectural tradition (Jencks: 1991: 194).

So, when we study the architecture of the 20th century, we will discover the hidden secrets of continuity in our architecture and that those traditions are still alive. Even though modern architecture pretends departure from the architectural history, the period it had occupied in the whole international culture history constitutes only a very small part relative to the abundance of architecture history and culture (Greenberg: 1988: 44).

Greenberg, the American architect and one of the leading classical architects of the late twentieth century maintains in an article in 1994 entitled Why Classical Architecture is Modern that classic architecture has a record extending to more than 300 years which proves its ability to find an equilibrium between the perpetual human values and the requirement of the present. Classical architecture was able to achieve that by adopting an architectural language that was capable of meeting different requirements of man and society (Greenberg: 2006: 201).

1.1.4. History and the Theory of Architecture

Sibyl Moholy-Nagy regards the relationship between the architecture theory and its attitude towards history as an understanding of historical thoughts and concepts and merging them in an amalgam where history and contemporarism are synonymous, while Sir John Summerson, one of the leading British architectural historians of the 20th century argues that there is an added value in deriving the architectural theory from history of a chronological sequence represented as a history of architectural ideas (Johnson: 1994: 21).

The interference between the theory and the history of architecture is achieved at the level of interpretation, sources, intentions, meanings and influences. The relationship between them can be seen as a figure - background relationship

where the theory is considered the figure and the history is the background which contributes in defining and making the theory evident. Thus; theory is associated with and affected by history (Jonhson: 1994: 22:23).

In Italy, for instance, following a vigorous opposition to modern architecture led by the students themselves, early in the 1960s' advanced courses in teaching architecture based on architecture history were adopted. These courses were a mixture of criticism and architecture history called Metodo Storico Critico or Historical and Architectural Methodology in view of the fact that history couldn't be established without architectural criticism (Zevi: 1965: 12).

So, the architectural history is a branch of architectural criticism as it employs interpretive and descriptive techniques in defining architectural achievements and alterations over time (Collins: 1965: 3).

Peter Collins confirms the interlocked relationship between the theory of architecture and, it's history , criticism and role in the designing process. He considers that the history of architecture plays a basic role in building up the architectural theory that he believes could be induced via three means, two of which rest on the history of architecture and the third on the self-criticism of the architectural theorist of this history (Attoe: 1979: 21).

This is evident in the shift that took place in Philip Johnson's thought after being the most faithful student of Mies the German architect but early in the 1960s' he began to shift toward what he called the tradition eclecticism which is, from his point of view, was not a revivalist[20] architecture in the conventional academic concept but rather an attempt to pick up what he liked about history "I try to pick what I like about history" confirming that an architect should be familiar with his history and know it very well (Jencks: 1991: 66).

Intentional correlation between history and the theory of architecture is not seen from the perspective of historicism. What is meant here is that the theorist seeks the help of history to understand the surrounding circumstances and the spirit of the age or zeitgeist[21] The basis of this idea is the existence of a shared spirit generated from the meant culture that dominates all innovational works of that culture and that period. On the basis of this view, cultural products have come to mean, a given perceivable style or value of any culture or period (Gelernter: 1995: 165).

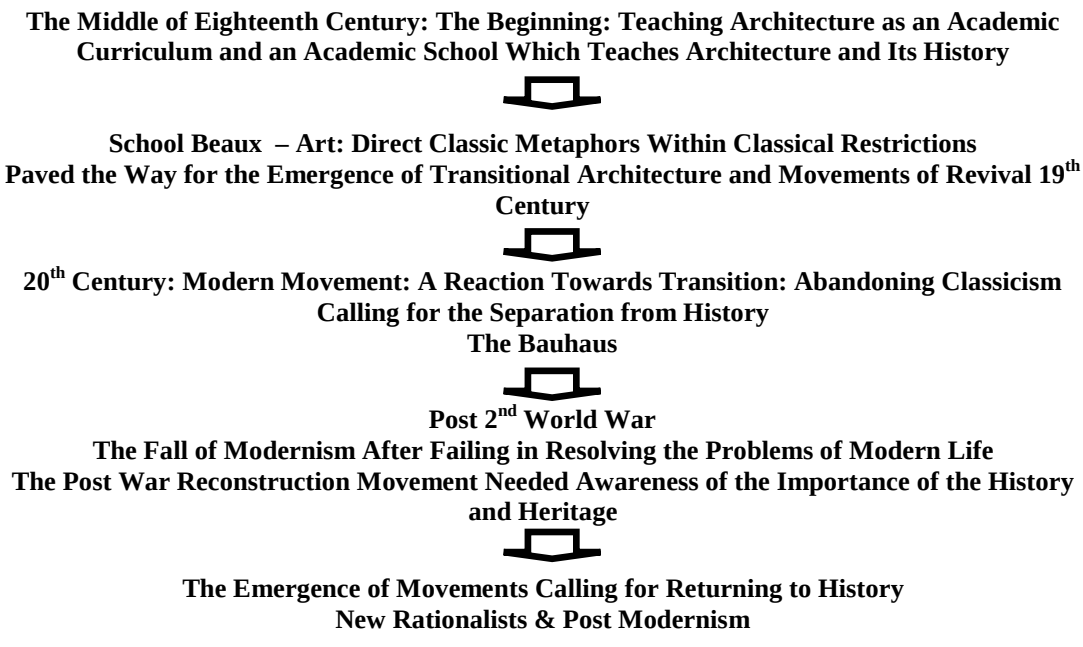
German idealists[22] of the 19th century have developed this concept which has come to be known today as the spirit of the age which was adopted by the proponents of the Historicism in German ideal thought in the 19th century like Friedrich Hegel[23] (Collins: 1971: 64).

It is here that the perspective is different than the historical perspective and its intentional determinism. This perspective is unacceptable as Edward Hallett Carr (1892-1982) an English historian maintains that nothing in history is determinate though in formal perspective and that for the events to occur differently, their causes should be different. Historicism, from the point of view of Sir Nikolaus Bernhard Leon Pevsner (1902 - 1983) an English scholar of history of art is having faith in the power of history such that the original activity is choked to death and replaced by an activity inspired from previous ages, while; Roger Scrutonan English philosopher and writer maintains that historicism has no specific methodology through which the deeds of a certain period with its spiritual values and its determinants can be merged and connected (Johnson: 1994: 271:272).

1.1.5. A New Vision

From all that is mentioned, we see that history and architectural theory that could verify the originality of cultural product and achieve communication with history as well as preserving the age spirit and its requirements at the same time, is the one that is based on the awareness of the value of the cultural environment-cultural heritage within the cultural contemporary context. **And this clearly indicates the importance of studies dealing with perspective - cultural environment in formulation the cultural identity,** which constitute the contemporary architectural theory, which leads to cultural architectural product, reflects the cultural originality within the context of contemporary architecture where the history of architecture and theory of architecture are one body in the perspective of the cultural environment (Diagram: 1.0).

Diagram:1.0: The Intellectual Turnings of History Concept with the Theory of Architecture.



Moreover, it can be said that there is an academic confusion in terms of the manner adopted when studying the history of architecture. So, it is very important to submit an analytical view concerning the systems that study the history of architecture, to provide the cognitive background of the system, through which the classification and analyzing the studies that deal with the historical, cultural and architectural product in general in section two.

1.2. Systems of Studying the History of Architecture

1.2.1. The Descriptive Studies of the Historical Architecture

The descriptive methodology is one of the wide spread scientific methods, which depends basically on Observation, and where the researcher focuses on a given phenomenon with precise examination at a moment of time representing normal state or situation, and under the same conditions he can observe the same thing at any moment in the future. This can be done as long as the basic hypothesis behind this methodology is that any phenomenon almost emerges from a common defined pattern or from what is called the norm. Research in accordance with the descriptive methodology is achieved in two stages; the first is the observation stage, where the problem or the phenomenon or the case under discussion is observed. The second is the registration stage, where the observation is accurately recorded (Leedy: 2004: 98).

He who follows a descriptive methodology should comply with the accurate description of the architectural and cultural patterns of the productive historical periods together with giving an identified abbreviation about the period architectural properties (Table: 1.0) as:

1.2.1.a. Fletcher's Study

History of Architecture on the Comparative Level.

Sir Banister Flight Fletcher (1866 - 1953) an English architect and architectural historian whose book in the history of architecture is considered one of the significant references in the schools of architecture as it describes architectural patterns in accordance with a descriptive system with the following components:

- The affecting factors including, from Fletchr's point of view, the geographical, geological, environmental, historical, social and religious factors.
- Architectural peculiarities such as the location, the architectural form the style and the constructional properties. He discusses all this in a comparative descriptive framework to clarify the general properties of each period or culture.

1.2.1.b. Jordan's Study

A Concise History of Western Architecture.

Robert Furneaux Jordan (1905 - 1978) an English architect, architectural critic and novelist maintains that the architectural forms are temporal - spatial products. Therefore; he describes the architectural products of the productive historical periods in accordance with variables that emerge from time and space properties, the most important of which from his point of view are as follows:

- Intellectual and knowledge variables that change in accordance with time and space.
- Technological and constructional variables change in accordance with time and space.
- Environmental variables change in accordance with space.

1.2.1.c. Giedion's Study

Space, Time, and Architecture.

He describes architecture, in accordance with his theory, as having a relationship with the factors of time and space and he tries through the description of

architectural patterns of different periods to reach the connection between them but not the points of departure.

Table:1.0: The Descriptive System in Studying Historical Architecture.

Theorist	Historical System	System Components
Fletcher	§ The Historical System: A Descriptive System based on historical periodization[24] (temporal and spatial) chronological Included: § Influential factors. § Architectural characteristics. § Prominent examples. § Classification according to the basic constructional types.	General characteristics: § Location. § Architectural Formation. § Stylistic and construction characteristics.
Jordan	§ The Historical System: A Descriptive System based on historical periodization (temporal and spatial) chronological Included: General explanation.	§ The description is general.
Geidion	§ The Historical System: A Descriptive System based on historical periodization (temporal and spatial) chronological Included: Describing a set of architectural models for each period or each region.	§ The description is general.

1.2.2. The Analytical Studies of the Historical Architecture

1.2.2.a. Frankl's Study

Principles of Architectural History.

Paul Frankl (1878 - 1962) was a German art historian-Discusses the history of architecture style for the post European Middle ages until the 20th century in accordance with two a methodology based on two systems as follows:

§ Historical System: In this system he departs from the Chronological Periodization of traditional spatial - temporal architecture context and suggests a new methodology quoted and developed from his teacher Heinrich Wolfflin[25] called the polar opposites methodology where distinction between one period and another cannot be fulfilled in accordance with spatial-temporal

components but can be done when a majority of approximate-orientation architectural models dominate a minority of opposite orientation architectural models, i.e. when two opposite poles emerge on different levels (Frankl: 1968: 187:188).

- To discover the two opposite poles elements of similar main traits, compared with each other and throughout the study of their stability or change throughout time. For example, the geometrical plan and the organic plan are opposite poles on the level of spatial planning, and they also represent the orientation towards centrality in design and opposite poles. The orientation to create one mental image or many images represents two intellectual orientations and two opposite poles on the level of treatments and the visual and sensational organization (Frankl: 1968: 185).
- Critical System: This system has three main components, which Frankl views as important and fundamental to analyze architecture in general and diagnosing the difference on the level of style specially. These components are: spatial form, corporeal form, and visual form (Frankl: 1968: 158) (Table: 1.1).

1.2.2.b. Kimball's Study

A History of Architecture.

Fiske Kimball (1888 - 1955) the American architect and architectural historian adopted the Vitruvius's view concerning the elements of good-quality architecture. He asserts that durability is the most important element with the faith that there are constant factors, which have a vital role in composing the architecture of certain areas. These factors are natural climate conditions including geological and

climatic elements and others, the influence of inherited traditions and the influence of the previous civilizations in the region and the neighboring areas. The last two elements are connected to the historical and cultural background of the region, so it has become necessary to take these influences into consideration when studying the development in architecture history (Kimball: 1977: 5:6).

According to this point of view Kimball studied the international architecture history beginning with the ancient and classic ages and its extension to the modern architecture in the twentieth century. The adopted methodology is the analytical - descriptive methodology whose historical system relies on the traditional historical chronological Periodization. While the analytical system consists of several components, which are:

- Defining the historical and cultural dimensions for the historical era.
- The historical origins of architecture and tackling them.
- Types of the prevailing buildings.
- Architectural and stylistic developments.
- Architectural examples, where some distinguished architectural models for the relevant era are tackled in detail describing the role of cultural and historical values in constituting the architectural model in terms of plan, construction systems and construction and ornamental elements (Table: 1.1).

1.2.2.c. Huyghe's Study

Larousse Encyclopedia of Prehistoric and Ancient Art.

The architecture from René Huyghe (1906 - 1997) the French writer on the history, psychology and philosophy of art point of view is a part of the evolution and

the whole advancement process of thoughts, cultural and human traditions. And that the architecture and the arts of a certain era are tightly connected with the prevailing philosophical perspective. Therefore, knowing the historical, geographical and social conditions is not enough to study and analyze the architectural product for a certain era (Huyghe: 1981: 12).

And the more important of that is discovering the various influences on architecture and the prevailing trends and their influence on each other. Moreover, architecture can be interpreted historically and psychologically by studying the attitude from perpetual laws and dealing with them and finally the attitude from norm and traditions (Huyghe: 1981: 13:14).

In his book, Huyghe relies on an analytical methodology to study the history of architectural court with its historical system in accordance with spatial - temporal periodization. As for the analytical system, he focuses on the interpretation of architecture for each period historically and psychologically as mentioned previously through a number of axes such as:

- The historical background and its details, religion, the governing regime, the prevailing social and philosophical perspective.
- The influence of beliefs and spiritual and religious values.
- Attitudes towards traditions.
- The character of architecture and arts.
- Dealing with the space.
- The prevailing construction types, their properties and the reflection of the previous components on them (Table: 1.1).

Table:1.1: The Analytical Systems in Studying Historical Architecture.

Theorist	Historical System	System Components
Frankl	§ The Historical System: A Descriptive analytical system Included: Analyzing the European architecture according to what he calls the polar periodization methodology aiming at deducing stylistic characteristics of the selected period.	§ Spatial form: Analyzing ground plans to deduce types of spatial organization. § Primordial form: It means masses and articulation. Yet the book discusses the treatment of surfaces. § Visible form: The perceptive experience generated in movement. § Purposive form: Functional, constructional and expressive value.
Kimball	§ The Historical System: A Descriptive analytical system Included: Spatial-temporal scrutiny study for international architecture together with focusing on the role of the constructional system in the emergence of different architectural styles.	§ Natural conditions and construction systems: The role of natural environment in the emergence of constructional systems. § Prevailing architectural model types. § Development of the prevailing types. § Architectural patterns :Construction systems, important construction elements, the basic constructional shape and the ornamental elements.
Huyghe	§ The Historical System: A Descriptive analytical system Included: Analyzing the international architecture in accordance with psychological and historical perspectives.	§ Historical background: Reign regimes, religious, philosophical and social perspectives. § Building materials, religious beliefs and spiritual values. § Historical summary: Prevailing buildings types, characteristics, available materials and dealing with them besides the attitude towards traditions.

1.2.3. Vision in Depth

In general, the studies that dealt with architecture history within its theory on the one hand and its descriptive and analytical systems from the other, explain the way how to classify and analyze the studies that examine architectural cultural product; **and by which can assess the nature of the historical system to be adopted in this study.** Also, these systems provide us with a concrete background knowledge through which studies that dealt with the Mesopotamian cultural product in section three could be classified and analyzed.

1.3. Systems of Studying the History of Mesopotamian Architecture: Literatures Review

The first central question moved us towards reviewing the studies that dealt with the Mesopotamian cultural product. We found that:

- These studies focus on the archaeological descriptive aspect.
- These studies isolate the form from the meaning.
- These studies ignore the discovery of the reflection of the mental product on the material product, so they didn't deal with the basic mental structure that lies behind the cultural products.

After examining them thoroughly, we found that they are as whole documentary studies generally aimed at giving an image of the architectural and the artistic products of the Mesopotamian culture or the other remaining parts as they are. The author has distinguished two different types regarding their style. However, they are integrated in granting the documentary image concerning each case under discussion. Following are the archaeological and descriptive studies.

1.3.1. Archaeological Studies

It is a kind of pure exploratory studies of the remaining archaeological sites of the architectural, cultural, and artistic product. It aims at giving a clear image about the state of these cultural products as standardized plans and documentary images. The most important of these studies are as follow:

1.3.1.a. Georges Perrot's Study

Georges Perrot (1832 - 1914) was a French archaeologist. Perrot edited and contributed to the journal Revue archéologique. His works include Souvenirs d'un Voyage en Asie Mineur or Memories of a Trip to Asia Minor (1863) and the ten - volume Histoire de l'art dans l'antiquité or History of Art in Ancient Times.

- **A History of Art in Chaldea and Assyria.**

The study is an attempt to deal with an important aspect of Mesopotamia architecture, especially the Assyrian architecture represented by the walls of Assyria, its fortifications and gates as the remainder of these elements and parts were documented in terms of their locations, dimensions, and shapes in addition to providing some imaginary images for these parts in the past by resorting to the translation of some clay cuneiform tablets that helped provide a speculation about the shapes of those parts of the city at that time.

So, The Historical System: is an archaeological system based on historical periodization - temporal and spatial - chronological presentation of the Mesopotamia art and architecture. Description set of architectural and artistic models for different periods, also Influential factors, artistic, and architectural characteristics for different periods.

System Components: General properties of architectural and artistic, classifying the most prominent forming photos and visionary paintings.

1.3.1.b. Anton Moortgat's Study

Anton Moortgat (1897 - 1977) was a Belgian archaeologist. He was the first full professor for the archaeology of the ancient near east in Germany.

- **The Art of Ancient Mesopotamia: The Classical Art of the Near East.**

The study is an attempt that dealt, in general, with arts in the civilization of Mesopotamia and part of it was assigned to architecture in this civilization. The study tackled the Mesopotamian architecture in two axes. The first, in which the study divided arts in Mesopotamia civilization in accordance with the ancient, middle, and modern ages and is based on these periods where represented the stages of developments and shifts of arts in Mesopotamia civilization. The second axis examined the arts in this civilization which were represented by wall sculptures and statues especially in palaces in terms of their shapes and denotations. And this study relied on studying architecture in relation to the arts of sculpture and imaging.

So, the Historical System: is an archaeological system based on historical periodization - temporal and spatial - presentation of the artistic and architectural works implicitly and describing the artistic works mainly in Mesopotamia included are descriptions of artistic and architectural models for certain historical periods in sequence.

System Components: General properties are Standardized and virtual for the artistic and architectural models, photos and visionary paintings.

1.3.1.c. Andre Parrot's Studies

André Parrot (1901 - 1980) was a French archaeologist specialized in the ancient Near East. He led excavations in Lebanon, Iraq, and Syria.

- **Nineveh and Old Testament.**
- **The Arts of Mankind: Assyria, Nineveh, and Babylon.**
- **The Arts of Mankind: Sumer.**

- **Nineveh, Babylon, and Assyria.**

The studies are an attempt to explore art and architecture in Mesopotamia in terms of the elements that both form and influence them in general. Although every study is characterized as dealing with a certain period of time or a certain geographical spot, these studies were characterized by repetition in tackling the different topics as significant parts of these studies were allocated for sculpture but architecture was implicit often. So, these studies dealt with the arts of sculpture and architecture in terms of shapes and denotations in general.

So, The Historical System: is an archaeological system based on historical periodization - temporal and spatial - description of architectural works implicitly and describing the artistic works mainly in Nineveh, Assyria, Babylon, and Sumer. Included are general descriptions of certain periods, models, and the factors influencing their formation for different periods.

System Components: General properties, plans, photos and visionary paintings.

1.3.1.d. Seton Howard Frederick Lloyd's Studies

Seton Howard Frederick Lloyd (1902 - 1996) was an English archaeologist. He was President of the British School of Archaeology in Iraq.

- **Ancient Architecture, Mesopotamia, Egypt, Crete, and Greece.**
- **The Archaeology of Mesopotamia: From the Old Stone Age to the Persian Conquest.**

The studies in a general attempt were to review the ancient or historical architecture and a significant part of the study was assigned to investigate the Mesopotamian architecture. The studies tackled the Mesopotamian architecture in

two axes. The first, in which the studies divided arts in Mesopotamia civilization in accordance with the ancient, middle, and modern ages represented by Sumerian, Akkadian, Babylonian, and Assyrian civilizations. on the basis of these periods that stand for the stages of development and shifts through a detailed review of the political, economic, geographic, and religious factors and the second axis tackled the architecture in terms of its relatedness to the Mesopotamian arts of which the most important are sculpture and imaging.

So, The Historical System: An archaeological system based on historical periodization - temporal and spatial - presentation of the Mesopotamia architecture. Included are descriptions of a set of urban and architectural models for different periods.

System Components: General properties of towns and the architectural and artistic, classifies the most prominent forms, photos and visionary paintings.

1.3.1.e. Donald John Wiseman's Study

Donald John Wiseman (1918 - 2010) was a Biblical scholar, archaeologist and Assyriologist. He was Professor of Assyriology at the University of London from 1961 to 1982.

- **A New Stela of Assur-Nasir-Pal.**

The study in an attempt confined to one of the architectural aspect of Mesopotamia civilization, especially the Assyrian civilization, represented by stella of Assur-Nasir-Pal. The remainders of the parts were documented in terms of the locations, dimensions, and the shapes in addition to providing some speculative images for these parts before as a result of the influence of time, and that was done

through translating some cuneiform clay tablets which helped provide a speculation about those lost parts and their uses at that time.

So, The Historical System: an archaeological system based on historical periodization - temporal and spatial - excavation of an architectural component site. The documented presentation of architectural components includes the main elements and components within a certain period.

System Components: Standardized and virtual plans of the component site and photos.

1.3.1.f. Robert McCormick Adams's Study

Robert McCormick Adams (1926) is a U.S. anthropologist and archaeologist, his interests have involved extensive field work in the Middle East.

- **An Early Prehistoric Site in the Warka Region.**

The study in a definite attempt is confined to one of the architecture aspect of Mesopotamia civilization especially the Sumerian civilization and also considered the cornerstone for the archaeological studies in lower Mesopotamia. It is a specialized archeological work for the most important archaeological sites in the warka region where the remainder of the parts in terms of the locations of the main parts, their dimensions and their shapes belong to Sumerian style. Also the translation of some cuneiform clay tablets found in the site was employed to help infer the temporal periodization of the site.

So, The Historical System: an archaeological system based on historical periodization - temporal and spatial - excavation for Mesopotamian city site. The documented presentation of a city site includes its main components within a certain period.

System Components: are standardized and virtual plans of the city site with photos.

1.3.1.g. Eva Strommenger's Study

Eva Strommenger (1927) is a German Near Eastern archaeologist. She was among the first students in the class of Anton Moortgat. In 1954 she graduated with the work in Mesopotamia.

- **5000 Years of the Art of Mesopotamia.**

The study is an attempt that depended on dividing the arts and architecture in Mesopotamia in terms of their development into specified period of time which are the ancient the middle, and the modern. So, the development stages were divided into three sub-stages which implicitly represent shifts in the arts and architecture in those ages. The second axis of the study tackled the most important Mesopotamian cities in terms of the location and the architectural remains. The study depended on the most important functional patterns in the Mesopotamian city, describing it in terms of its internal spaces and uses as well as some formal elements and providing some symbolic denotations for it.

So, The Historical System: an archaeological system based on historical periodization - temporal and spatial - presentation of the development of architecture and art in Mesopotamia. The descriptions of the artistic and architectural models within time division are considered basic moves within a different period.

System Components: are general properties for the architectural models functionally and the artistic symbolically, plans of the archaeological ruins and photos.

Finally, these studies included an important side of the Mesopotamian civilization both in the architectural and artistic aspects represented by cities, fortifications, gates, and the major buildings and artistic deeds in a documentary technique for what had remained of these elements as well as other parts in terms of their locations, dimensions, and shapes besides giving them certain imaginative images about their previous shape by the assistance of translating some of the clay cuneiform tablets which helped in forming a vision about the shapes of those Mesopotamian cities, parts of certain place and time for each study.

The aim of these studies can be summarized in displaying artistic and architectural archeological discoveries, clay findings, and the cuneiform paintings in a documentary way. The most important characteristic of these studies is the schemes measured for historical cultural components, which could be utilized in the capacity of being an informational base in analytical studies.

1.3.2. Descriptive Studies

A kind of studies characterized from the previous studies by describing the aspects that are related with the cultural architectural and artistic product. These studies describe the elements and other details besides their aesthetic, construction, and usage over space and time. They might extend and show information about the owner of the cultural product and the person who formed it. The most important of these studies are temporally sequenced:

1.3.2.a. Henri Frankfort's Study

Henri Frankfort(1889 - 1954) was a Dutch Egyptologist, archaeologist and orientalist.

§ **The Art and Architecture of the Ancient Orient.**

The study is an attempt to deal with the arts and architecture in the ancient near east in general and in Mesopotamia as a main component in it particularly. Arts and architecture were dealt with in terms of the development through certain periods of time: the ancient, the middle, and the modern which implicitly represent transformations in arts and architecture. The study also provided a review of the most important Mesopotamian cities in terms of the location and the architectural ruins from one hand, and the most important functional patterns from the other hand, where they were described including their spaces and uses.

So, The Historical System: a descriptive system based on historical periodization - temporal and spatial - presentation of the development of architecture and art in Mesopotamia. Included are descriptions of the artistic and architectural models within time division that are considered basic moves within a different period.

System Components: are general properties for the architectural models functionally and the artistic symbolically, plans of the archaeological ruins and photos.

1.3.2.b. Alexander Badawy's Study

Alexander Badawy (1913 - 1986) was an Egyptian Egyptologist. He was born in Egypt and taught Egyptology in the USA.

§ **Architecture in Ancient Egypt and Near East.**

The study is an attempt to explore architecture in the Near East. In a great portion of it, the study tackled the Mesopotamian architecture according to its topic, the nature of construction materials, a description of the most important cities, and

the nature of the elements surrounding them as well as describing the buildings in terms of their functional patterns including the functional parts and the architectural characteristics.

So, The Historical System: a descriptive system based on historical periodization - temporal and spatial - presentation of the influencing factors on the urban and architectural constructs of Mesopotamia. Included are descriptions of a set of urban and architectural levels, mentioning the functional types within different periods of time.

System components: are general properties of towns and the architectural and artistic, classifying the most prominent of them and documentation in descriptions, photos, and visionary paintings.

1.3.2.c. Amer Sulaiman's Study

- **Ancient Iraq in the Ancient History: A Brief of the Cultural History.**

The study is an attempt to conduct a general review of the Iraqi ancient civilization. Part of the study was assigned to the Mesopotamian architecture by relying on several axes of the study represented by dividing the Mesopotamian architecture in terms of its development with an indication to the most influential factors in its formation, a study of the most important construction styles in it such as palaces and temples, the most important cities, and the most important ruins of those cities using a descriptive method which relies on briefness and generality.

1.3.2.d. Sherif Yousf's Study

- **History of the Iraqi Architecture in the Various Ages.**

The study is an attempt to deal with the Mesopotamian architecture through several axes including dividing the Mesopotamian civilization into different time periods in terms of its development and demonstrating the most important characteristics of the Mesopotamian cities in addition to describing the most important functional patterns in that architecture represented by palaces, temples, and defensive fortifications. The study also tackled the construction materials and structures at that period. The study adopted description and emphasis on certain periods and the objective was to show the importance of those periods and providing a general idea about them. The study also showed that architecture emerged, historically, in Mesopotamia since the most ancient ages and that the religious beliefs of the peoples which dwelt in Mesopotamia was one of the most important factors which motivated this activity and that was the reason behind discovering the most important buildings in the ancient cities, which were discovered by archaeologists buried under the archaeological hills were the temples.

1.3.2.e. Jean Bottéro's Study

Jean Bottéro (1914-2007) was a French historian. He was a major assyriologist and a renowned expert on the ancient near east.

- **The Near East: The Early Civilizations.**

The study is an attempt of providing balance between the historically - sequenced narration, and the cultural history between the registration of people and rulers' succession with the events, and between the analyses of civilizations they produced. The study tackled the Civilization of Mesopotamia extensively as it is very important in making the human history. The study was characterized by dealing with Mesopotamian architecture in accordance with the division of history which depends

on the basic shifts in the political and social history of Mesopotamia. So, the review of the cultural architectural product in a descriptive and general manner in which the artistic and architectural products are interrelated in terms of their different functional patterns.

1.3.2.f. Waad Radhi Al Nei'aimi's Study

- **The Ancient Iraqi Architecture in Mesopotamia Civilization.**

The study is an attempt to include the Iraqi architecture in Mesopotamia civilization. It is an architectural study that dealt with the Iraqi architecture from different perspectives including studying the environment surrounding architecture and the elements that influence it, studying the stages of development of architecture through the various temporal stages, as well as studying the design and symbolic concepts and their impact on the architectural formation and their focus on the shapes of the important internal spaces within the functional pattern and their mental and symbolic denotations and classifying some of the functional patterns depending on the nature of these shape. The study was characterized with extensiveness in analysis of all the architectural parts and from different aspects and not just concentrating on one single aspect in that architecture in addition to relying on the different Mesopotamian within different periods of times.

1.3.2.g. Jinan Kadhim's Study

- **The Dialect of Communication in the Iraqi Architecture.**

The study is an attempt to find out the distinguishing architectural patterns that differentiate functional patterns within the ancient Iraqi architecture. Therefore,

the study tackled the factors impacting on the formation of the Mesopotamian architecture such as the prevailing natural environment as well as the constructional techniques and building materials. This study was based on identifying the temporal stages of the evolution and development of the Iraqi architecture and reaching the identification of the most important functional patterns in the ancient Iraqi architecture, the most important parts that form it as well as identifying the nature of relationship between these parts on the level of the spaces and their relationships, in order to determine certain architectural patterns, providing general information about the rest of patterns. The study also dealt with the mass elements and the external architectural joint briefly, as the main focus of the study was on the space and its relationships within the single functional pattern.

Finally, these studies have partly included the architectural cultural product and its development over certain periods of time in accordance with each study in terms of the nature of the building materials used in that architecture, together with a description for the most momentous cities, the nature of the factors surrounding them along with describing buildings on the basis of their functional types represented by palaces, temples, and fortifications, describing them with regard to their functional parts, architectural characteristics, internal spaces, usage, some other formal elements and finally demonstrating some of its symbolic connotations.

The aim of these studies can be summarized in the indication to the factors most affecting the formation of the architectural product let alone the artistic product such as portrayal, statues, and murals, especially in palaces, with respect to their shapes and connotations that rely on a descriptive style marked by generalization and expatiation. Still, they could be useful being an informational base in analytical studies.

1.3.3. Critical Vision

Studying the cultural architectural products over time does not require an archaeological or a descriptive perspective to these products, but it requires an analytical attitude. This attitude rests on being familiar with the historical, social and religious facts as well as other circumstances relevant to the society cultural background in different epochs, and their reflection on the thinking structure and the cultural architectural products of the society. But, these studies focused on descriptive archaeological aspect, which is basically based on taking notes about the phenomena in question with detailed expatiation and there would be contradictions in the quality and the accuracy of those notes.

In addition to that, those studies have not introduced an analytical system which deals with the Mesopotamian cultural architectural products, although the structure of those studies is based on a group of axes which is repeated in various degrees of importance. They are:

- Studying the most important cities in terms of their historical and developmental stages as well as presenting the most important remains of their cultural architectural products in a documentary and descriptive technique.
- Studying the emergence of the cultural architectural products and their development through time and space in a documentary and descriptive technique.
- Identifying the most important functional types of the cultural architectural products, their main parts and their components in a documentary and descriptive technique.

So, all those studies have proved clearly the existence of a physical phenomenon of the Mesopotamian cultural architectural product and eventually doing so unintentionally and unconsciously. There are two points, however, identified as the knowledge gap related to previous studies:

First: Most of those studies don't explicitly deal with the originality of the Mesopotamian cultural products by means of not mentioning the basic mental structure that lies behind the cultural products. However, it supposes its existence as a result of the cultural development and prosperity within it, and most of those studies haven't profoundly looked into the source - essence and language - grammars of products. So this made most of them scrutinize the form of the cultural product especially the external features by deriving them from the outer appearance -the mental product - theory - or the mental expression structure abstaining from targeting what stands behind the cultural product in the manner in which the material product - application - or the architectural expressions structure denote.

Second: Most of the previous studies dealt with the cultural product as being a means for verifying their hypotheses not as being a component that has its own formational base in the culture. The previous studies were implicit in explaining the reasons behind the maintenance of the Mesopotamians of certain cultural forms and showing the reasons why some of those cultural forms that were presented in their studies were considered desirable. And the bulk of those studies have tackled the Mesopotamian cultural products on varied temporal regional stylistic levels without penetrating deeply into unifying the product of the culture, which might impose itself on the researcher for the lack of knowledge in this field or might have not been included within the scope of its study.

Yet this doesn't make the attained findings inclusive and therefore are weak in diagnosing the originality of the Mesopotamian product and its peculiarity, something caused to referring it to non-Mesopotamian cultures and origins such as Persian or Egyptian! This makes its starting points varied and contradicting between the originality of cultural connection and being in touch with it, and between the stylistic inspired by other cultures and the functional reasons as well.

Furthermore, most of them didn't review the bases of the products profoundly, so they didn't clarify: the reasons that motivated the Mesopotamians to preserve certain architectural cultural expressions or the reasons behind considering these architectural cultural expressions - which were submitted in their studies - desired for the Mesopotamians, and that posed itself on the researcher, may be due to the lack of information in this respect or being not in the scope of the research.

Was that the case or were they resting on the orientalist(26) western perspective about the originality of the Mesopotamians' architectural cultural product, which is the most common and spread in the world due to the vast number of available western literatures and their far-reaching influence. So, their studies turned into axioms for the subsequent generations of the thinkers and researchers in the history of the Mesopotamian architecture, where these western literatures always indicate the non-Mesopotamian origins. This is done using architectural expressions in the Mesopotamian cultural architectural product, relating those to non-Mesopotamian civilizations and origins such as Persian of ancient Egyptian origins; even if they deal with the consistency and the functionality and the beauty of that architecture. So, it is clear that they present a bewildering image about the historical fact in terms of the influencing and the influenced and eventually they draw confused

boarders when dealing with the traditions and legacy that constitute the Mesopotamian cultural architectural products**.**

The problem of this controversy lies in the submission of most of the architectural controversy makers to the mistaken explanations of the cultural originality of the Mesopotamian traditions and heritage, which was basically fabricated by the western literatures that sometimes discredit it on the one hand and put an end to the possibility of reaching it on the other hand; and I don't understand the historical reasons behind that.

1.3.4. The Problem of the Study

Consequently, the problem of the study was manifested in the non-clarity of the knowledge related to the originality of the architectural cultural product in terms of the reflection of the mental product - the mental expression structure - represented by the core of the Mesopotamian cultural architectural product on the material product - the architectural expressions structure - represented by the architectural product itself, within its cultural environment, which formulates the particularity-contemporary cultural architectural identity related with the Mesopotamian cultural product.

1.3.5. The Objective of the Study

In the light of the problem, the objective of the study was identified with: clarifying the knowledge related to the cultural architectural product in terms of the reflection of the mental product - mental expressions structure - represented by the core of the Mesopotamian cultural architectural product on the material product - architectural expressions structure - represented in turn by the architectural product

itself, within its cultural environment, which formulates the particularity-contemporary cultural architectural identity related with the Mesopotamian cultural product.

Achieving the objective requires uncovering a cultural concept that is considered the link between the mental product - the mental expressions structure - and the material product - the architectural expressions structure - and the mechanism in which it operates, through which we can root the cultural product. So, the importance of the research is manifested through answering the following central questions:

What is the concept which is considered the link between the mental expressions that result in the emergence of any architectural product in the form in which it appears, and the architectural expressions structure represented by the cultural product itself, in reaching its main structures?

What is the mechanism or the system for concept which is considered a link between the mental expression structure, and the architectural expressions structure? And that provides the background for formulating the comprehensive procedural definition.

The comprehensive procedural definition provides the background for formulating the central hypothesis of the study, in terms of its capability in diagnosing the congruence between the mental expressions structure, and the architectural expressions structure.

Verifying the central hypothesis is linked to three approaches:

- Revealing the structure of the mental expressions of the cultural core forming the cultural architectural products of Mesopotamia.

- § Revealing the structure of the architectural expressions of the cultural architectural products of Mesopotamia.
- § Demonstrating the congruence between the mental expressions structure and the architectural expressions structure of the Mesopotamian civilization.

  Where, the concept operates in its nature as a middle link between the first and the second points through its mechanism that tries to address the congruence between the mental expressions structure with the architectural expressions structure of the Mesopotamian cultural products, and consequently revealing the originality.

1.3.6. The Structure of the Study

For this reason the structure of the study was constructed based on the knowledge related with the questions of the study and according to sequenced steps to fulfill the objective of the study. So, the structure of the study comprises five chapters systematically leading from the objective in accordance with the process of the accumulative cognitive construction, corresponding with the inductive, inference, elicitation and conclusion, using the critical analytical perspective. **So, all that pave the way for asking the second central question: What is the concept which is considered the link between the mental expressions that result in the emergence of any architectural product in the form in which it appears, and the architectural expressions structure represented by the cultural product itself? Where, chapter two designed to define the special cognitive reality related to the second central question.**

CHAPTER TWO

ROOT OF TYPE

2.0. Introduction

Chapter Two was designed to define the special cognitive reality related to the second central question and that is done through three sections. Section One involves an attempt to identify the concept through which the originality of the architectural cultural product can be identified in order to provide the cognitive background of the concept which is considered the link between the mental expressions structure and the architectural expressions structure, represented by the general form of the type concept. Section Two involves an analytical vision of the particularity of the type concept linguistically, terminologically, and philosophically, in order to provide the cognitive background, and reaching its root which is represented by the prototype, identifying its main structures; which are represented by essence - source , language - grammar of the prototype. Section Three involves a review of several studies which tackled the type in architecture in general, and through the four stages of development of the concept in the theory and history of architecture. This is done to provide the cognitive background related to congruent structures of the type or the roots which constitute the architectural prototype, concluded by the linguistic and philosophical fields with their structures in architecture and identifying what stands behind the formation of those structures.

2.1. The Link Between the Mental Expressions and the Architectural Expressions Across Theory of Architecture

Heinrich Wolfflin described in his presentations about the expressive content of the type as a sort of Formal and Spatial Patterns. It is believed that the culture product has an Expressive Content having a relationship with the perceptible physical form and by that he is considered the first who introduced this concept (Rykwert: 1981: 11).

Wolfflin called for finding out the Tectonic values in art and architecture, those who value a relationship with the aesthetic of the origin and its expressive values. This style of thinking has come synchronously with the appearance of the idea of the abstract art. Wolfflin's important addition in his new language on the concept of space and propagated to perceive or see this form in that space. The effect of this concept has remained until today and lately has a significant effect on architecture. The adoption of the formal and spatial order as a base for describing the type is considered a real reflection of his presentations. According to his view on the history of architecture, it could be handled within two orientations of originality and continuity;

- The history of architecture as a sequence of styles.
- The history of architecture as a transformation of typology.

(Curtis: 1996: 29).

2.1.1. The Theory of Architecture and Style

In 1806 Aubin-Louis Millin de Grandmaison (1759 - 1818) who was an antiquary and naturalist, erudite in various domains listed in his dictionary entitled The Dictionary of Fine Arts, a definition of architecture depending on the style. It

states that style is what is attributed to the peoples in the definite periods of time, and it doesn't provide a particular conception or an explanation of the style per se except its faith in the place - time relationship of the style. James Elmes (1782 - 1862) an English architect, civil engineer, and writer on the arts**,** agrees with him in his lectures about architecture asserting the importance of studying style in accordance with the peoples and the time period, and this is also considered a place-time trend (Collins: 1971: 65:66).

In 1863 in his book The Course and Current of Architecture, Samuel Huggins, the English architect and writer**,** stressed that all the styles which are familiar to us didn't appear as an act of will or as a trial of someone to invent or innovate new style, but they came spontaneously and through circumstances created by political, thought or religious revolutions or as a result of social changes (Collins: 1971: 21).

Through Schinkel, the Prussian architect, city planner, and painter , art and architecture are viewed as parts of a general culture, so they should reflect and describe that culture and they have educative dimension. Their mission is enlightening the soul, subliming the general taste and supplying a better understanding of the history. His architecture acquired a humanist dimension that came as harmonious with renaissance humanism[(27)]. The importance of Schinkel's presentations in the field of the architectural thought rests on its revival of the concept of the fourteenth century humanists concerning the style. It was found that the nineteenth century problem was in the thought pluralism, while style is single and monistic in its nature and cannot exist within pluralism, pointing that all the great architectural styles in history emerged in the monistic societies, and monism doesn't mean one individual product; but what is meant is the monism is the view or the

thought and epistemological standpoint or the monistic common faith (Lesnikowski: 1982: 7:10).

The style is the shape that reflects a certain age and all its values and concepts, and it is not the product a certain single individual but a definite period of time, so, there is a role for time and place as two vital elements (Spletz: 1910: 1:2) (Porphyrios: 1981: 104).

In the thirties the modernist architectures adopted the International style[(28)] which is the style associated with the modern movement of the art and architecture. Walter Adolph Georg Gropius (1883 - 1969) the German architect and founder of the Bauhaus School in 1923 argued that all the previous styles should be thrown away, rejecting all the thought and stylistic pluralism calling for the international unity that could be accomplished by means of what is called the international style, which reflected on the level of processors and spatial organization, the expressive and detailed processors and the relationships between them on the level of parts and whole within the city (Porphyrios: 1996: 92).

For the post-modernism architecture, they preferred to invoke the classical values in architecture thinking that they take them back to the more humanistic ages. Modernism and its international style resulted in several environmental, expressive and humanistic problems because it attempted to erase - by its call to create a unified world - the local and national particularities and to deluge the world in a sea of non-humanistic generalities. This resulted in the revolution against these post-modernistic values, who argued that moving back to the past and the lessons embodied in the historical models and their styles are the alternative solution for the contemporary problems. So, the historical styles were used as signs and symbols of the historical stages that represent the golden ages of the civilization and the spirit of the age, for

the post-modernistic, was characterized by going back to the values of the classicism (Curtis: 1996: 230:257).

For Peter Eisenman (1932) an American architect whose presentations appeared in the eighties and whom I totally agree with in his resistance to the idea of style, considered this interpretation of the style is merely an illusion and an assumption because in the days of Eisenman, the concept of architectural product suggests that there is a priori relationship between history and its manifestation at any moment and that enables us, by defining the dominant spirit of the age, to know the style that can stand for that age, and this, as he sees, resulted in a problematic of the modernism architecture. He considers the spirit of the age as being associated with the present instead of being associated with eternal absolute this is the origin of the concept for Friedrich Schelling. But they could only produce a sense of values which are favorite to them and not international or cosmic as they should be (Eisenman: 1996: 218:219).

Eisenman describes the concept as a pure assumption when it is related to the attempt of finding the relationship between the history and its manifestations at any moment in time because the temporary style fails to accomplish that because he personally considers that impossible. For him, time is an eternal series which he calls Timelessness, and it is characterized with the infinite flow. It is continuous and when we try to mark a point of beginning or a point of end on it, then we cut it and thus time loses its particularity. And in his perspective, the problem of the modernists is they couldn’t see themselves within the infinite eternal series of continuance and put the beginning to their end (Eisenman: 1996: 216:218).

2.1.2. The Theory of Architecture and Type

The modern movement attitude in calling for departure from history is based on its rationalistic orientations, which disregards history and believes in a constant start from the zero point. It doesn't seek the continuity with inherited physical values in architectures but aims with its utopia at continuity with the intellectual values and dimensions of the architecture, which is considered basic and significant in the rationalistic perspective. Therefore we find that modern architects have embraced the concepts of type and typology and reproducing these concepts in view of the fact that type is the basic abstract intellectual storage which can be reproduced in different models and shapes without touching or affecting the original value. Consequently; what the modernists already unaccepted was not the history itself but the superficial exploitation of it and that history, in reality, wasn't disregarded but they demanded that history be understood through new styles (Curtis: 1996: 13).

Wolfflin, in his book Age of Renaissance and Brock states that the concept of type has been already introduced in the early 19th century literature and its pioneer is the French theorist Antoine-Chrysostome Quatremère de Quincy, the French armchair archaeologist and architectural theorist**,** who confirms that nothing yields from nothing and that the action of building is generated from what he called pre-existing germ or which he called the Type. In accordance with this concept, many styles over different periods of time could be established on a single typical order with common roots. This could mean appealing to traditions and to the cultural heritage as evidence and approving typology when it is the effective power in the design pursuant to what the designer regards or feels as an essential effective power (Johnson: 1994: 271).

Robert Stern the postmodernist architect in 1980, focused on the study of history confirming on inheriting forms as continuous or communication signs, while Paolo Portoghesi the Italian architect, theorist and historian in 1982 confirmed the importance of topology namely City Typologies in creating and achieving historical originality (Jencks: 1991: 13).

Approving the style as a tool to be studied as history doesn't necessarily mean re-employing formal for the style as historical symbols and signs as did post modernism architects. History could be studied through the presence of a common base in the cultural form (Leathart: 1945: 34).

New details might be innovated and become expressive in a new style but its intellectual base remains constant as in the styles of the renaissance(29), baroque(30), rococo(31), and new classic ages in Europe, all of which have one formal source representing the basic component of its interior system such as type (Frankl: 1968: 191).

The study of historical architectural models, as confirmed by Paul Frankl, comes in two levels; the first level is intellectual or conceptual where a single formal source is the base for its system and is often on the typological level. The second level is the formal physical, achieved through reusing of the physical model, repeated models. So, the typology in study of historical architectural models had been approved since the most ancient cultures, so the architecture that quotes from the ones that came before it alters what had been discovered by the first as a solution for a constructional problem into façade ornamental usage and treatments aiming at fulfilling visual continuity among cultures (Frankl: 1968: 191).

We take as an example and as a citation the architecture of Rome, which has quoted the idea of Greek orders, which were established by the Greek as an

expressive perceptive system whose base is a resolution for a constructional system in conformity with cultural and intellectual beliefs and values. When the Romans quoted the Greek orders, they used them as ornamental elements only and for the first time appeared the separation between the construct expressive values and the values of ornamentation. When the typology is approved as a system in study of historical architectural models, the properties could be diagnosed on the typical conceptual intellectual level and the physical as well. This indicates the importance of typology in perceiving culture heritage.

The type is mental conceptions for pre buildings that are considered the best solution for the problem whether functionally or in conformity with life style, or the suitability of materials in a given site and climate where the type is related to the mental perception of a given culture and how the designing shape should be (Broadbent: 1980: 127:147).

Type is related to the ideas of variability and invariability which is a religious, philosophical and social concept associated with human creation and instincts, as well as with the change taking place in cultural, social, materialistic factors, and scientific developments. Several architects including Antoine-Chrysostome Quatremère de Quincy confirms that the architectural character can be divided into two kinds: the constant character, marked by being substantial and general representing man and nature in every place and every time having the power of effectiveness and existence. The second kind is related to the type of building, which is peculiar, relative and expressive of the function, the use and the customs (Colquhoun: 1989: 249).

Therefore; the term implies two explanations: the first is related to man and the concepts, beliefs and notions he believes in, falling under one common class

among a group of people. The second expresses perceived physical things or human materialistic products, which carry common evident features of each culture, that show the peculiarity of that culture together with the secondary interchangeable attributes that could be developed with other cultures. Typology has gained these potentialities because typology, as Giulio Carlo Argan (1909 - 1992) the Italian art historian maintains, represents the internal structure which is a principle having the potentiality of reproducing infinite shapes (Argan: 1996: 240)(Taylor: 1986: 6).

Aldo Rossi (1931 - 1997) the Italian architect and designer asserts that the type is constantly presenting itself as a necessity and is related to mind and feelings and carries a social value since it is related to the society, human nature, his mental conception, and his experiment due to the fact that the form of the specialized type or prototype varies from one society to another and correlated with the function, the technology, the style and the unique personal mode of each building and each architect (Rossi: 1982: 19:24).

Rossi considers the city parts or what he calls permanencies are represented by monuments and buildings with regard to the fact that they are the urban dynamics of the place and he deals with them in accordance with type and typology perspective. Type, from Rossi's point of view, develops relative to the need for values and aesthetic dimensions as well. Typology is something constant and complicated and according to his rational perspective, it precedes the form, constituting it. Typology brings us near to the essence of architecture and has always proved its presence, in spite of changes, as a basis for the architecture and the city.

Broadbnet asserts that Rossi's employment for type concept lies in continuity with the architectural traditions claiming that he aimed at employing typology

concept to establish the primary continuity that constitutes the base of the apparent diversity of individual urban facts (Rossi: 1982: 35:41)(Broadbent: 1990: 169).

David Bell, in his presentations, pointed out to the difference in the point of views concerning the interpretive issues about typology, asserting their variation in identifying the relationship of typology with history. In doing so Bell presents Argan's point of view, which demands typology apart from historical interpretation and which regards that accepting typology involves postponing the historical judgment. Whereas, De Quincy calls for the adoption of typology as a kind of critical practice aims at reproducing history as a cause in architecture (Bell: 1991: 25).

Type is considered one of the earliest characteristics of architecture in Vitruvius' list which was accepted despite the variation and differences in their definitions. Vitruvius defined type as a standardization of change in the parts of a certain system on the one hand, and the structure and the composition of the system on the other. It is a quantitative approximation, and by that I mean setting out from the group of the system parts which are related to each other with unique relationships that make them as modules. These modules are correlated compatibly to form the whole (Moughtin: 1992: 30).

The prototypes, as Joseph Rykwert the author of many influential works of architectural criticism and history, argues, are deduced from a group of cultural models to extract the common formal conceptual roots and the resistance of their internal shape, and that the stylistic characteristics can be deduced by means of analyzing a group of repeated models and consequently the type becomes the most important source of the cultural product rooting (Frankl: 1968: 187).

Hereby, the possibilities of explaining the type concept within theoretical contexts appear. Schelling , in the nineteenth century, stated that type has two

entities: a tough invisible entity whose center is the mind which he called the absolute and a visible physical entity which represents the physical embodiment of the type concept (Frankl: 1968: 187).

Schelling's interpretation to the type's absolute existence gets along with the interpretation of Antoine-Chrysostome Quatremère de Quincy of the type, which he submitted for the first time in the nineteenth century too, and both of them argue that it is ambiguous, metaphysical, and both of them are mentally associated and consider it the most important means of realizing the originality of a certain cultural product (Gelernter: 1995: 97).

2.1.3. The Emergence of the Style

The beginning of new a stylistic period, as Paul Frankl calls it, requires the emergence of transformations on all these levels in a repeated order because the emergence of a style can not be judged by one model only (Frankl: 1968: 187).

Here is a difficulty in determining the stylistic period as transformation occurs gradually and it might not be clear for all the elements at the same time. An element might keep another element unchanged in the new style. But the characteristics of the new style begin to overcome the unique products in addition to all the cultural products of the particular period of time and the particular geography. This interpretation is in accordance with Paul Frankl's presentations about the emergence of the style whose process of emergence is gradual and requires common cases (Frankl: 1968: 187).

2.1.4. The Emergence of the Type

Vincent Joseph Scully (1920) the Professor Emeritus of the History of Art in Architecture, identifies the nature of the type characteristics stressing that it is tightly related with the structural composition of the architectural cultural product, asserting the stability of types when he indicates that type can never be violated by the circumstance or the style , and it is never doubled by other shapes (Scully: 1985: 112).

The physical embodiment of the concept of type or what is called the architectural model reflects on the artistic architectural form and the physical embodiment of the absolute also reflects on the architectural form. The repetition of the type produces various models which might not be similar, in its physical existence, but they have a common thought background; whereas, the repetition of the model is a repetition and imitation of a physical entity with all its variables and its formal and compositional characteristics. The style according to Antoine-Chrysostome Quatremère de Quincy is based on a single common - root typical order. This is what can be called the prevailing type. Therefore, the emergence and the development of the style is achieved by the repetition of similar models with a single typical basis (Curtis: 1996: 16:29)(Gelernter: 1995: 97).

The transformation of the type into a model with physical entity repeats to change into a style that requires tools or certain ingredients which were called by artistic critic René Huyghe - the components and the ingredients of the plastic world. He argues that the artistic work which is one of architecture’s most important branches , passes through three levels of transformation. They are:

- The first level: The world of thought and feelings.
- The second level: The plastic world.

§ The third level: The world of visible reality.

The second level is the one which provides the ingredients of the transformation of the cultural product from the first level or the immaterial, to the third level or the material, from thought to reality and we will call the ingredients of this world the physical formation. The process of production, in which we explain the orientations, that give the type a functional and material dimension, is capable of fulfilling the continuance and identifying the originality of the cultural product (Huyghe: 1981: 13).

2.1.5. A New Vision

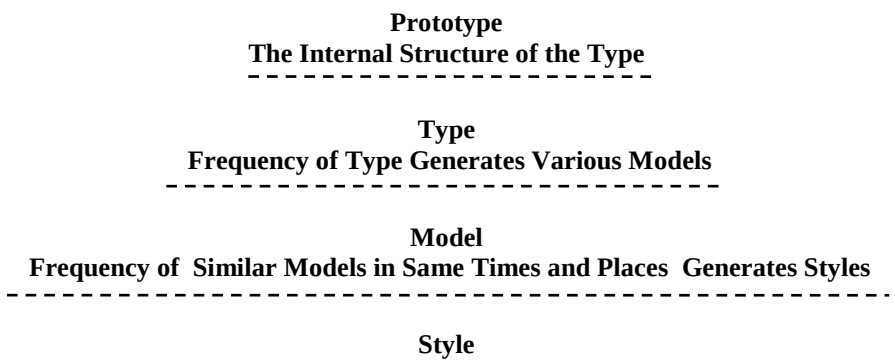
After all, most studies that deal with the architectural theory have presented the knowledge background for the way to deal with cultural products over history as a style sequence or as typicality conversion. These studies are concurrent on the fact that studying products through the type is closer to come true than the effect of culture on its products, for the unique attributes of type that put it in the articulation point between the thinking held by the culture and applying it in its products.

Hence, the originality of the architectural cultural product could be diagnosed through type as being the connecting link between the mental expression structure and the architectural expressions structure over history. Therefore, it becomes evident that any attempt to study the architectural cultural products through history must pass through the gate of type in general and its root represented by prototype in particular.

This therefore stands for the internal structure of the form and as its originator. It has the possibility of generating infinite number of forms. The physical materialization is referred to as model which reflects the architectural form and

frequency of type generates various models. The single type is the base of style with common roots and could be referred to as the prevailing type. Thus, the emergence and development of style might be achieved through reiteration of similar models of a single prototype (Diagram: 2.0).

Diagram:2.0: The Root of Architectural Type - Prototype - Model, and Style.



Since type has profound levels of perception that represent its roots, called prototypes, which could be drawn out from a set of cultural models stand for the common conceptual formal structures as well as the components of its internal formal structure, these roots are regarded the most important sources of rooting a cultural product. Thus, it's important to provide an analytical insight of the bases and roots upon which the concept of type rests in the fields of knowledge related to the structures of concepts in general; represented by linguistic and philosophical fields to identify its basic roots and structures in section two.

2.2. The Root of Type

2.2.1. The Root of Type in Language

2.2.1.a. The Root of Type Linguistically

A group of people of the same trend in reference to The Prophet's Hadiths (Peace Be Upon Him): "The best of this nation is the first type, then the second and followed by the precious". The plural of type is types , and is referred to a group of people having agreed on the same doctrine, thought or the same method , and is also referred to things that are alike in class. The verb is typify, that is a denotative for typifying or having the meaning of leading or showing the way (Mukhtar Al Sihah: 1950: 750)(Muheet Al Muheet:Second Volume: 2131).

According to Longman Dictionary: Pro.to.type / n [(of)] the first form of something, form which all later forms develop (Longman Dictionary of English Language and Culture: 1998: 1075).

Oxford English Dictionary states the following: Prototype /n.(earlier) in Greek form typon [French, or late Latin prototypus from Greek prototupos] The first or prototype of something; the original of which a copy, imitation, representation, derivative, or improved from exists or is made; a pattern, a model, an archetype. That of which a model is a copy on a reduced scale. Clark, they look at flowers and trees not only as delightful objects, but also as prototypes of the divine (Oxford English Dictionary: 2002: 2380).

Boyer Dictionary in 1727 defines type as a symbolic form figure, shadow, and representation. The concept of type in its literal meaning used by Greek means impression. The Greek definition of the concept formed the base for the 17th century

common definition, represented by the following: That by which something is symbolized or figured (Mann: 1991: 127)(Vidler: 1977: 95:99).

2.2.1.b. The Roots of Type Terminologically

Type means order which is the language that links patterns together for clarification and understanding (Salingaros: 1998: Intro.).

As for its first root, it means searching for a mental relationship and a rational approximation for things, structures or principles compared to inherited or acquired events or phenomena. Or it is an attempt to find a language of dialogue with repetitions to discover its secrets in order to obtain a kind of mastery, understanding, interpretation and prediction (Al Guesbi: 2005: 8).

The type is something necessary for scholars, chroniclers, artists, musicians, industrialists and economists. So, type could be functional or digital such as the digital progressions, the quadratic relationship 2, 4, 16, 256, which can be geometrically represented formally or imagery in a curve shape by applying the Descartes' coordinates[32] for instance, or might be geometrical formally or imagery. Thus; the type of the straight line would be as an infinite sequence easily understood of equal straight - line segments; as the base of the type is a kind of minor equal differences or form standardization. To find the type in a curve line; we need to know the starting point, the differences and common dominant variations -the average- and the base of the type here is minor and equal differences too. Therefore; type could be determined in curves or any other geometrical shapes by observing those differences and variations. Type can also be observed in random too (Al Guesbi: 2005: 8).

Whatever the case might be; there must be a type. Therefore, the idea of disorder is meaningless , and even what is referred to in reality as random events, they occur in an understandable and describable sequence such that could be distinguished from other random events and seem - in their primitive - prototypes - state simple and abstractive. Typology in language, art, music, games, architecture, and religious rituals is little and minor, as these fields of knowledge are affected by the surrounding environment. Consequently, the seeker for prototype should be familiar with all the details, the observations and the meaning. Prototype is found in nature, in physical systems and non-living objects minor but infinite (Al Guesbi: 2005: 8).

2.2.2. The Root of Type Philosophically

As for philosophy, the type defined as bearing the intellectual dimensions of a thing which is obscure, general, having symbolic dimensions hidden in mind and physically embodied in what is called the model which represents a special case of the type that is clear and of definite features. The birth of type depends on the emergence of a series of cultural products which possess common conceptual forms and have the solutions for thought, functional, religious, cultural and ideological requirements. Consequently the type is considered one of the most important means of object origination. Also , Antoine-Chrysostome Quatremère de Quincy maintains that a type doesn't present - largely - an image of something that can be copied, simulated or imitated very accurately as much as what it represents as an idea for the element which in turn acts as a base for the pattern or the model. A type doesn't represent a constant formal value but represents an intellectual relationship and a

basic value without presenting certain limited values or the relationship that gives the building special character or identity (Merza: 2000: 125)(Argan: 1996: 240).

2.2.2.a. The Roots of Type in the Worldly Philosophies of the Platonic and the Aristotelian

The concept of Type particularly appeared in the Platonic(33) and in the Aristotelian(34) presentations where a study by William John Mitchell (1944 - 2010) the Australian architect and urban designer stated that the concept of type is correlated with both the Platonic ideals and the Aristotelian forms through explaining that the concept of type has a very long and complex history, in which ideas drawn from several different fields become interwoven. In philosophy, it may be traced back to Plato's ideals and Aristotle's form, and it has been continually under discussion (Mitchell: 1992: 246)(Abdul Aziz: 2007).

The Platonic idealism and the Aristotelian realism are correlated with the essence of nature owing to the fact that it is the origin of artistic works (Al Bustani: 1996: 60).

The platonic point of view considers that an artist simulates a general idea found in his mind seeking the right and complete form of something or Ideal forms; where as the Aristotelian point of view considers that the Greek have realized the under essence of things optically. So, the Greeks regard the world of things like a sequence of typical forms demonstrated and embodied in unique patterns (Mitchell: 1992: 89).

2.2.2.b. The Roots of Type in the Theological Religious Philosophies

The concept of type particularly appeared in the theological religious philosophy[35] presentations of the middle ages[36] referred to as Torah or The Book's interpretations that focus on interpreting the Holly Book to preach for the old types achieved by new ones (Mann: 1991: 127)(Abdul Aziz: 2007).

The typological interpretation of the Torah represents an interpretive method or principle employed for establishing the close connection between the early Torah text and the modern text via confirming the substantial resemblance from none, that is based on types and its root or the prototype (The New Encyclopedia Britannica: 1982: 221).

Theological presentations on the concept have included a number of related aspects. So, the definition of type according to theology represents an event in the new testament or the Bible[37] is symbolized in the old testament or the Torah[38] and the most prominent definitions of type that are close to the Torah's interpretation is the definition for the concept of typology as a form of symbolic interpretation and the connection between two events or persons, the first of which signifies not only itself but the second, while the second encompasses or fulfills the first (Mann: 1991: 127).

Theological presentations indicate that the typical relationship is primarily asserted to determine the identity of the prototype, taking into account that discovering types neither represent the issue of historical principle nor a random method like the metaphoric interpretation because the typical interpretation entails a relationship that could be proved between the type and the prototype (The New Encyclopedia Britannica: 1982: 221).

Theological typology in its interpretations relies on the concepts of repetition and similarity (Mann: 1991: 128:129).

Torah typology is related to continuous history as a context for it. So the typical interpretation focuses on the continual and persistent relationship where the type is seen as a beginning and the prototype as a subsequent inspiration (The New Encyclopedia Britannica: 1982: 221).

Religious typology focuses on the historical development of the type. So it gives the past a presence as a kind of history interpretation or as a creative method to grant newness along with the seed of oldness entailing constant reaching to perfection through prototype visualization. It maintains that the prototype reiterates or repeats the original type, but it also consummates and sums up, perfects and completes the original (Mann: 1991: 129).

Anthony Vidler, the critic, asserted its dominant use in describing symbolic actions and for symbolizing Christianity, since the French Academy Dictionary 1773 states that the ideas of God represent the types of all creative things where the meaning of the origin is found to be related the unified principle or law (Vidler: 1977: 95).

2.2.3. Vision in Depth

In brief we could say that the root of type - Prototype - existed as a concept in the linguistic and philosophical fields and has a special meaning that can be defined and distinguished through these fields indicating to (Table: 2.0):

Language: We can say that the root of type - Prototype - is expressed as a concept, idea, symbol, principle and a law and has two overlapping levels from a single structure, appearing to be source-essence, language-grammar which gives the

idea of the root of type - Prototype - the traits of the concept which seeks to diagnose the originality of a certain cultural product.

Table:2.0: The Most Prominent Aspects Related to - Prototype - the Root of Type in Language.

	Essence - Source of Prototype	**Language - Grammar of Prototype**
Linguistically	§ An idea, Symbol, Law, Principle and Divine origin.	§ Stands for a symbol or a figure.
Terminologically	§ Searching for a mental relationship.	§ A language of dialogue.

(Abdul Aziz: 2007).

Philosophy: We can say that the root of type - Prototype - has a very long and complex history, in which ideas drawn from several different fields become interwoven. In philosophy it may be traced back to Plato's Ideals and Aristotle's Forms, and it has been continually under discussion since the Platonic and the Aristotelian Philosophies and the religious philosophies or theology.

In The Worldly Philosophies we find the root of type - Prototype - related with their major structures source - essence, language - grammar though the philosophical visions differ in defining these structures. For instance, we find that essence varies between the ideal and the real world. And in The Theological Religious Philosophies we find the root of type - Prototype - expresses itself as a symbol and as a base for thinking as theses presentations emphasized that learning by type is considered the natural form of human thinking. They have also presented these two overlapped levels of the type root considering that the Torah's texts are rendered - initial types - that produce successive types expressed by the texts of interpretation and explanation and adopting similarity, repetition, and finding the constantly evolved relationships throughout history (Table: 2.1).

Table:2.1: The Most Prominent Aspects Related to - Prototype - the Root of Type in Philosophy.

	Essence - Source of Prototype	Language - Grammar of Prototype
Worldly Philosophies	§ An ideological and ideal essence § Materialistic and real essence. § Natural origin.	
Religious Philosophies	§ Torah thought. § The divine authority represented by the Torah texts.	§ Is a style of interpretation and explanation that employs the religious meaning as an ideal. § Typical classification is the key to understanding and interpretation the historical process. § Represents the constant and interrelated relations throughout history.

(Abdul Aziz: 2007).

Hence, we could say that the idea of the prototype and its main structures - the essence - source, the language - grammar - enables us to regard it as a concept which is able to diagnose the originality of the cultural product in general. And this corresponds with what was in type as a concept to diagnose the originality of the cultural product through its main structures or its root.

As a result of that, the importance of reviewing the architectural literature that discussed type in architecture in general becomes evident, to show the correspondence of type root structures that form the prototype which were attained through linguistic and philosophical fields of knowledge with its structures in architecture and in identifying the elements of its formation in section three.

2.3. The Root of Type in Architectural Presentations

Will draw the most important aspects of the type in question, which was discussed during the four periods, classified on the basis of the transformations in the concept (Abdul Aziz: 2007) which are, as follows:

2.3.1. The Root of Type in Architectural Presentations at the Pre Enlightenment Age[(39)] Before 1750

Architectural presentations in this period were characterized by their insufficiency and scarcity in discussing the architectural theoretical issues in general and the theory of type in particular. So, I will touch upon a synopsis of the most prominent presentations of the periods earlier to the enlightenment age and the practices where the concept of type appeared in the presentations of Marcus Vitruvius Pollio in his interpretations about the origins of buildings via his definition of the prototypes adopted in architecture. His presentations, for instance, confirms that the dimensions of the human body represent a prototype of the Greek columns measurements and indicate as well to the Roman myths as a prototype of the Roman architecture system (Abdul Aziz: 2007)(Gomez: 1984: 31).

The presentations have also confirmed on the spreading of the concept of prototype as an idea during this period, Alberto Pérez-Gómez (1949) the architectural historian and theorist mentioned that one should realize that prototype can be subsumed by more general and appropriate notions such as idea, as in the architectural idea used by Vitruvius in this etymological sense of image (Gomez: 1991: 12).

Luciano Semerani, who is a critic also, pointed out to the intellectual nature of prototype in this period and explained that it may be true that the idea of prototype as an imaginative model assumed clarity with Antoine-Chrysostome Quatremère de Quincy and lost it with Jean-Nicolas-Louis Durand (1760 - 1834) the French author, teacher and architect but the proposal of image as idea is as old as the world (Semerani: 1985: 11).

The basic role of prototype in the reviving and continuation of architectural history , norms and traditions had come into view too often an imitation of the architectural chef d'oeuvres prevailed in those periods , in order to achieve continuity with those masterpieces at which Julia Robinson’s presentations called it the cultural prototype that focused on materialistic embodiment as an iconic model stating that in ancient cultures the nominal denotation for type is generally related to a certain icon simultaneously embodies several concepts of building from the function to the prototype of construction to the rules of design (Robinson: 1991: 159).

Broadbent’s presentations have mentioned this role within his classification of the designing methods that generate the architectural form, stating that the typical design is based on the participation of a certain culture members in a constant mental image for that the design should be similar to, and considering it as representing a continuous tradition since the ancient cultures including local and primitive forms (Broadbent: 1980: 139).

David Bell’s presentations have discussed the relationship of prototype with tradition in consideration: the prototype represents a method of rational order which earlier was implicit in the cultural norms, so the prototype in this sense replaced the norms (Bell: 1991: 20).

Paul Tesar's presentations indicated that the idea of prototype via generalization and classification represent the norm and the myth which exemplify the perpetual theme in all worlds of thinking involved in assimilating the cultural and social meaning (Tesar: 1991: 165).

2.3.2. The Root of Type in Architectural Presentations at the Enlightenment Age 1750 - 1830

The middle of the 18th century witnessed the emergence of the philosophical enlightenment movement, a knowledge revolution against ignorance, whose supreme ideal was crystallized from two parts: the nature and the mind. The concept of type appeared in the presentations of a number of its theorists at which the development and maturity of typology concepts during this period have come to light in response for the following factors:

- First: The development of rational philosophical concepts at the hands of René Descartes(40).
- Second: The development of scientific concepts, physical sciences in particular.
- Third: The beginning of the industrial renaissance that witnessed a diversity in buildings' functions (Broadbent: 1977: 60)(Vidler: 1977: 106).

I will go into a summary of the most prominent presentations that included the following theorists:

2.3.2.a. The Root of Type in the Presentations of Marc-Antoine Laugier

The abbé Marc-Antoine Laugier (1713 - 1769) was a Jesuit priest and architectural theorist. Laugier is best known for his Essay on Architecture published in 1753.

The Enlightenment age was distinguished by a division of its theorists between the materialists who support getting architecture origins back to the primitive cottage - Adam's house - and the symbolists who back it up getting it back to the religious structure - the house of God - (Vidler: 1977: 97)(Abdul Aziz: 2007).

This period witnessed the emergence of the first architectural typical theory in which the concept of type as a principle was associated with the idea of primitive origins in an attempt to deriving the architecture basic elements, and the bases that made their composition, in 1753 at the hands of Marc-Antoine Laugier. Laugier is regarded one of the early theorists who transferred the principles of rational philosophy into design, demanding like René Descartes the adoption of natural sciences methodology, Newton's[41] idea in particular (Broadbent: 1990: 87).

Marc-Antoine Laugier believed that the real principles of architecture can be inferred from one of the patterns that Marcus Vitruvius Pollio mentions as potential origins for architecture represented by a primitive cottage constructed from props, beams and bow - shaped roof. Consequently, Marc-Antoine Laugier deduced that the essence of architecture consists of props, beams and bow-shaped roof, by which he presents a general architectural prototype (Broadbent: 1990: 88)(Mitchell: 1992: 90).

2.3.2.b. The Root of Type in the Presentations of De Chamout

De Chamout raised the slogan of :We must return to the source, to the principles, and to the type (Viddler: 1977: 95).

Treading in the steps of Marc-Antoine Laugier's ideas in establishing the primitive cottage as a type for all successful architectures, De Chamout supports the natural origin of architecture forms and defining type as standing for, "the first attempts of man to master the nature, adapted it in accordance with his needs, usage

and desires". He, as well, defined prototype as exemplifying , the things that are chosen by the artist from the nature, to help enlighten and trigger his imagination, So the trees are rendered original types - prototypes - of columns' type in the capacity of being one of the architecture basic elements (Viddler: 1977: 97:99).

2.3.2.c. The Root of Type in the Presentations of Jacques-François Blondel

Jacques-François Blondel (1705 - 1774) was a French architect. He was the grandson of François Blondel, whose course of architecture had appeared in four volumes in 1683.

The academic typical classification appeared at the end of the 18th century at the hands of Jacques-François Blondel in an attempt to convey the developed ideas of natural sciences(42) to the architectural theory, when he included -in his compilations- various classes of buildings that existed in the architect's reserve, identifying their general types such as theaters and hospitals…, confirming the presence of the general prototype for each type by which any individual building is constituted. Each basic type or prototype in the architectural practice was described, its programs were set forth in detail and its special characteristics were accurately depicted. Anthony Viddler asserts that the idea of peculiarity was then confined to buildings' outward appearance (Abdul Aziz: 2007)(Viddler: 1977: 99:101).

2.3.2.d. The Root of Type in the Presentations of Antoine - Chrysostome Quatremère de Quincy

Antoine-Chrysostome Quatremère de Quincy's presentations are considered one of the most remarkable architectural literatures that have dealt with the concept of type. They were adopted by post-modernism theorists and critics in building up their theories and criticism about the concept. de Quincy wrote the article of type in the 3rd section of his encyclopedia late in 1825 in an attempt to establish the original and the abstractive meaning of prototype - the germ, the rote - at which he represents the architectural prototype from his point of view, the architectural prototype was at once pre existent germ, origin and primitive cause (Viddler: 1977: 104).

He also pointed out that thousands of things of each type, come down to us via norm and that one of the basic tasks of science or philosophy is represented by searching for its primary origins and causes so that we can realize its objectives, and this is called prototype in architecture(Abdul Aziz: 2007)(Bell: 1991: 27).

He, as well, advocated Marc-Antoine Laugier's point of view in returning to the classic origins represented by the primitive cottage, de Quincy explained his visions on type considering that, the organized building art is generated from a pre-existent source and this source stand for the idea of prototype. He explains his concept on the ideal type as follows: the word prototype presents less the image of a thing to copy or imitate completely than the idea of an element which ought itself to serve as a rule for the model (Rowe: 1988: 191)(Broadbent: 1990: 90) (Viddler: 1977: 191).

De Quincy, in his presentations distinguishes between the prototype and the model stating that, a model stands for a thing that can be repeated as it is, as an antithesis of prototype by which we can realize works dislike each other. He also

confirms that, the whole could be accurate and hypothesized in the model, whereas, in prototype, the whole is more or less ambiguous (Broadbent: 1990: 91).

David Bell's presentations have pointed out to the symbolic implications of the concept of the ideal type in de Quincy's definition, demonstrating that de Quincy's definition of prototype proves that it is something shining with meaning, embodies and even expresses basic and significant architectural essentials throughout history (Bell: 1991: 23).

2.3.2.e. The Root of Type in the Presentations of Jean-Nicolas-Louis Durand

Jean-Nicolas-Louis Durand adopted a new point of view on type. His presentations have confirmed that classic orders don't simulate the natural primitive cottage or the human body. Ttherefore it cannot be considered an essence for architecture, and would be in contradiction with the former architectural theory and on the contrary, adopting the positivism view which for the first time called for the autonomous and self - sufficient architectural theory, and the one that is specialized and constituted exclusively from rational evident facts and pragmatic values (Gomez: 1984: 299:300)(Abdul Aziz: 2007).

Accordingly, Jean-Nicolas-Louis Durand started the 19th century project of type formation based upon the rule of internal structure and the programmed functional aspect of things as a logical outcome of rational classification of the Enlightenment movement, establishing distinguished shapes for each type and assembling the architecture's basic elements that couldn't be reduced like walls, columns and openings…, in accordance with inferred rules for each type to yield the authentic origin of the abstractive typical schemes. This art of assembling and organizing of each type was directed by a program derived from a study of all

previous similar programs and is subdued to the dominant law of economy (Viddler: 1977: 108).

Jean-Nicolas-Louis Durand was also interested in typical classifications, distinguishing the type nature that is related to its formation and structure and disregarding the architectural model's outward properties, so that the preliminary step represented assembling and comparing classes via assembling and matching architectural models of each type, the old and the modern ones (Viddler: 1977: 107).

Some of the effects of Jean-Nicolas-Louis Durand's order is his unintentional definition of the historical idea in architecture historicity. So his simple idea about progress sought to superiority for each type, via the internal understanding of the laws that constructing types and the dynamic changes of such laws under the effect of the outward change or the internal requirements which were able to pave the way towards realizing a sort of development in architecture (Viddler: 1977: 108).

2.3.3. The Root of Type in Architectural Presentations at the Modernism Age 1900 - 1960

Following the new classicism of the enlightenment age, the idea of type revived again after forty years to be in the interest of the second industrial revolution(43) Its pragmatic positivism contributed in fusing the concept of type in two major crucibles as follows: functionalism and standardization(Abdul Aziz : 2007). I will touch upon a brief of the most conspicuous presentations such as the studies of:

2.3.3.a. The Root of Type in Peter Reyner Banham's Study

Peter Reyner Banham (1922 - 1988) the prolific architectural critic and writer discussed in his book Theory and Design in the First Machine Age the intellectual base of the evolution and the development of the concept of type in modernism architecture, indicating to the establishment of the fundamentals of theory of type by some members of the cubism(44) movement in France affected by common inclination towards Plato's vague notions, and confirming on the similarity between art and machine influenced by the call to return to order, and to the literal meaning of returning back from cubism to classicism to centrally visible things and those of standardized construction (Banham: 1976: 220).

His presentations confirmed that, the idea of simple geometrical designs which are easily produced as a whole represented a common property by the end of 1920s', and that the reason behind its widespread is integration with the theory of types as well as with the notion of purists(45) on object - object , at which their discussions led to the idea of object - type or object - standard that stood for live integration of future notions, cubism and classicism (Banham: 1976: 225).

Likewise, Banham pointed out to the role of function and economy in crystallizing modern types, explaining that purism brought into view the mechanical law of choosing which establishes things of specified types emerging between the idealism of utmost benefit and correspondence with economical manufacturing requisites (Banham: 1976: 229).

2.3.3.b. The Root of Type in Sherban Cantacuzino's Study

The study of Sherban Cantacuzino discussed some of the peculiarity in the aspects of the concept of type in the period of modernism, pointing out to the main engagement of the modern movement, related to exploring and developing architectural models types. It means that the architectural models types have not been discovered before. However, in the 1920's, search had become more organized and related to the principle to serve the needs of the society that had been greatly affected by WWI [(46).] The critic also confirmed that the concept of type is related to the concepts of standardization and production as a whole considering that, since the architects of modernism focus on the inclusive re-testing of the society's new needs, design will become a kind of prototype which can be repeated in large quantities via manufactured production (Cantacuzino: 1977: 337:338).

2.3.3.c. The Root of Type in Juan Pablo Bonta's Study

Juan Pablo Bonta's study pointed out to certain aspects of the concept of type peculiarity in the presentations of modernism, explaining that the adapted typical intellectual orientation towards functional typologies in the early twentieth century was of a pragmatic base that aims at helping men of the selfsame craft solving their designing problems via the organizational patterns and dimensional matters represented by graphic standards, technical and dimensional information. He also points out to the widespread of literatures on the classes of functional architectural models' types (residential, commercial and industrial) in books and articles that focus on the modern patterns among them (Bonta: 1979: 126).

2.3.3.d. The Root of Type in Freserick A. Jules's Study

Freserick A. Jules's study defines this type from Modernism point of view, which indicates the architectural model type, and considering that buildings can be assembled in classes like schools, houses and hospitals…, each type stands for a symbol of its function in the society and having a traditional place in the context of that society. The study also points out that, the type of the architectural model has antecedents represented by the mental images which symbolize the function of that architectural model in the society (Jules: 1979: 245).

Jules' presentations define the concept of prototype as representing specific patterns based on careful research into the optimum form for their specific use. These patterns are called prototypes. Architects are continually looking for these optimum ordering patterns, both in the architectural model they visit and in the preliminary research they do for a particular object. Jules indicates the importance of the prototypes for the designer, considering that the starting point in many designing efforts includes the identification of prototypes that are applicable for the special situation (Jules: 1979: 161:162).

2.3.4. The Root of Type in Architectural Presentations at the Post Modernism Age After 1960

The concept of type emerged in the presentations of this period, as its theorists were interested in searching for hypothesis and design methodologies to be as an alternative for the preceding modernism architecture. In their presentations, the theorists of this period confirm the role of typology in generating a symbolic continual architecture (Abdul Aziz: 2007). I will go into a summary of the most prominent presentations of the following studies:

2.3.4.a. The Root of Type in Carlo Aymonino's Study

Carlo Aymonino (1926 - 2010) an Italian architect and urban planner best known for the Gallaretese housing complex in Milan **,**defined the architectural model type as the study of the potential associations of elements to obtain a classification for the architectural orders via types. He defined the element as representing a part of a whole that can be separated by analysis. He hypothesized that an element can be only be the right relative to the whole (Aymonino: 1985: 49).

He further identifies two kinds of typologies according to two kinds of elements that define them as follows: firstly, stylistic and formal elements, and secondly the structural and organizational elements.

Types of stylistic and formal elements in which classification is achieved by means of formal or independent types attempt to introduce a method for analyzing and comparing artistic phenomena. This is also disregarding the individual artistic evaluation and the historical presentation of the classified works. So it aims at searching for the architecture as an autonomous phenomenon through organized classification of formal fundamentals (Aymonino: 1985: 50).

Types of structural and organizational elements in which classification is achieved by means of functional or applied types aim at analyzing the phenomenon away from the judgment of the aesthetic value, taking into consideration the historical presentation of works. These types are applicable on architecture as an urban phenomenon via organized classification of the structural fundamentals (Aymonino: 1985: 49).

Aymonino points out that the architectural model type in this case stands for the study of structural elements which are industrially organized - not only architectural models, but also walls, afforested roads, gardens…the whole structure

of the constructed city - along with the aim of classifying them with the concern of the urban form for a specific historical period or a specific urban form. He considers that the classification within them stands for an organized tool of the phenomenon that establish the relationship among different entities components via a comparison in terms of its relationship with the urban form. Therefore, typology represents a tool, not a class, and it is one of the essential tools having the ability to carry out studies on the urban phenomenon (Aymonino: 1985: 50).

2.3.4.b. The Root of Type in Christian Norberg-Schulz's Study

Christian Norberg-Schulz (1926 - 2000) the Norwegian architect, architectural historian and theorist states that his presentations were a reaction for modernism disregarding the typical terms in its formal language. He considers that, modern architecture abolished the symbolic types of the past and replacing them by the functional dogma, which believes that forms are generated by functions. Thus its architecture had inclined toward simple competence. It, for instance**,** reduces the city hall into a managerial building and the cathedral into a meeting hall. Therefore there had been a need for the emergence of new archetype and prototype forms in new assemblies and interpretations that introduce symbolic and original architecture (Schulz: 1986: 14).

He also considers that classes of architectural works are usually known as being architectural models types. He confirms that the type becomes apparent in the unique work as an mental image or a figure (Schulz: 1985 :26:29).

Schulz further explains his point of view towards the relationship of type with language by saying "*the types is the essences of architecture, corresponding to the*

names of spoken language. Names belong to things, and thus designate the content of our everyday life world" (Schulz: 1985: 29).

He then defines the typical terms as tangible realism, indicating to the things that constitute our man - made environment and its meaning is expressed by its symbolic formal quality like a tower, a column, a house, a temple and a street…He classified these terms into:

- General terms: represented by prototypes that are distinguished by being, representing no single special thing but a large number of phenomena that have a common essence like a tower.
- Functional terms: represented by the functional types that are distinguished by being, representing a sub group of general phenomena , and which can be easily recognized in certain place and time like a tower of a German gothic cathedral(47) (Schulz: 1986: 18).

Schulz maintains that functional types are based on the prototypes and that prototypes are distinguished by being constant over history and having a general credibility. They disappear and come out again and are - in any time - subdued to new interpretations. These interpretations don't completely change from a state into another, as local and temporal situations have certain invariability containing special memories added to the symbolic prototype figure (Schulz: 1985: 129).

Schulz considers that the meanings borne by the symbolic figures as typical outputs that invest the mental image in denoting prototype. He affirms that they include an additional meaning and decries the semiological(48) point of view which regards the figures as representing signs or symbols (Schulz: 1986: 19).

2.3.4.c. The Root of Type in Andrea Kahn's Study

Andrea Kahn , in his presentations, affirms two basic hypotheses on the concept of type, which are:

- First: The idea of type is submitted to transformations according to changes in the epistemological cultural climate.
- Second: These changes lead to a point of view confined to a specific category, which is not in harmonious contemporary critical orientations regarding meaning and representation in architecture (Kahn: 1991: 107).

Andrea Kahn admits the double nature of the concept of type are as follows:

- First: The type is an analyzing tool for classifying architectural works via form or function by which the type becomes a formal and functional denotation.
- Second: The type is a principle more platonic and less realistic. It is a basic but not a determinant factor for the constructed form. It stands for the actual idea of architecture (Kahn: 1991: 109).

Kahn criticizes the wrong interpretations of Quatremère de Quincy's definitions which includes type as a principle that allows for invention. Type emerged from needs and nature and generating similar forms for similar usage carrying the meaning of norm, tradition and history on the concept of type, which has been understood as a kind of dualism leading to adopt one of the interpretations at the expense of the other. He considers that the one-sided nature of the previous interpretations of type from Jean-Nicolas-Louis Durand to Giulio Carlo Argan is questionable. Affirming that dualism in the concept of type with one supports originality and novelty, whereas the other supports norm , tradition and history, it can

be associated with a relationship identical to the one found in the literal and the figural meanings accompanying figurative literary statements (Kahn: 1991: 109:110).

Kahn calls for composing both cases of type where norm and novelty integrate in a dual relationship, instead of being a replacement. He aims at a new reading for the type related to yielding meanings in architecture, as well as investing the relationship - is like / is not - a model set up by the theory of metaphor such that can be in agreement with the dual composition of Quatremère de Quincy's definition (Kahn: 1991: 110).

Kahn makes clear the nature of his new vision on type by comparing it with the concept of imagination defined by Paul Ricœur (1913 - 2005) the French philosopher(49) and which represents, the ability to produce new classes by means of comprehension, producing and investing in spite of differences. Imagination is marked by being able to yield new classes and new meaning similar to the figurative structure of the concept of type - is like / is not - which invests strain between similarity and dissimilarity and allow for yielding new meaning and new forms (Kahn: 1991: 111:112).

He further criticizes the contemporary architectural climate, which reduces type and makes it confined on the meaning only, notwithstanding whether this meaning was the inherited or the acquired one borne by the form. He also confirms that his presentations are consistent with the current epistemological point of view according to which the contemporary theory and criticism fields are characterized by the deterioration of its conceptual structures that are confined to specific interpretations in their attempt to address post-modernism state.

Kahn explains the importance of his concept of type in considering the dual concept of type guarantees the critical applicability from the one hand and keeping it

away from oversimplification from the other. Hypothesizing the base for developing a point of view on type in the capacity of being a designing tool not confined on a given category can be utilized as being a critical structure closely related to the treatment of contemporary issues on meaning, representation in architecture as well as in other definite issues on authenticity and repetition that is associated with the past role within the present architectural production (Kahn: 1991: 112:113).

2.3.4.d. The Root of Type in David Bell's Study

David Bell defines the concept of prototype as being a kind of vague inspirer that activates enhancements in formal technology in the course of antecedents' analysis. He explains the nature of the typological thought in post-modernism architecture, considering that the rise of the typological thought within the last thirty years that preceded his stud**y**, resulted from the declared concerns to establish architecture as an autonomous effective principle and the generated principles that can be adopted, and which consider the city as a complex abstract of the materialistic culture and thus confirming the self autonomy of architecture (Bell: 1991: 19).

Bell explores into the symbolic nature of prototype, stating that the definition of Quatremère de Quincy of the concept of prototype as proven as the thing that shines with meaning. Giulio Carlo Argan's definition on the other hand refer to the prototype as the guard to the cultural principles and values and the boat that carries them over history, such that giving legitimacy to the collective human knowledge in certain architectural formations (Bell: 1991: 23).

Bell postulates that conventional or the cultural common tendency and even the geometric rules in itself are originated in prototypes and in fact are supposed to shine out as significant components of their meaning. So the output in this case

expresses the interpretable type by the architectural culture and this prototype declares the legitimacy of architectural cultural product as a canal that conveys and perpetuates the basic type. He also points out that Quatremère de Quincy's definition of prototype as a group of principles, or as something without a definite form affirms the criterion of the originated vagueness in the prototype as something meaningful and pushing it towards possible interpretation of the prototype (Bell: 1991: 24:25).

Bell in his presentations shows the variation in different points of view on prototype interpretations, stating that these interpretations vary in identifying the relationship of prototype with history while discussing Giulio Carlo Argan's point of view that demands the issue of typology apart from historical interpretation and that accepting the type entails the postponing of the historical judgment. On the other hand, Bell points out to Quatremère de Quincy's point of view which calls for adopting type as a kind of critical practice designs to yielding history as a an issue in architecture (Bell: 1991: 25).

Bell in turn inferred that, issues of interpretations on type or prototype and its objectivity in architecture displays at the end, many concerns about things and its relationship with meaning. This is because had we realized that meaning is necessarily originated in things, or being an interpretive action by means of several human institutions, then we will find that the conventional ideas about things and meanings as presented by typology, are varied (Bell: 1991: 26).

He continues to review the relationship of prototype with the origin, considering that the primary natural result of our assertion on prototype as something that shines with meaning is represented by being original too, taking for granted that the principles constructing the type have their foundations in a previous event. So the origin represents the interim fulcrum which is referred to as the typological moment,

when these principles come to existence as an accumulation of eternal solutions to perpetual architectural model problems. Thus, prototype is seen later as being the original cause that is concealed behind the architectural form , and each form continues to have such an original cause. David Bell cites Quatremère de Quincy's point of view on the relationship of prototype with the origin, according to which the typological thought represents this original quality of type which gives the legitimacy and which cannot be separated from Quatremère de Quincy's definition of type as a an incentive to the thing that shines with meaning (Bell: 1991: 27).

Bell affirms that, the original thinking is the prototype thinking, which searches to establish the meaning once for the whole and to centralize it at this origin. He also goes into different class of origins, explaining that they result from proving divinity, romantic nature or legendary heroes. Bell states that the third kind stands for the point of view of contemporary typological architects who consider the origin of types, results from the collective and innovative action of culture and history embodied in a form ,through the materialistic means (Bell: 1991: 28).

Bell concludes that prototype represents the unifier and the guarantor of the architectural consensus, since the typological thinking is a sort of conceptual tool for establishing and expanding norms in the architectural practice (Bell: 1991 :29).

2.3.4.e. The Root of Type in Dennis Alan Mann's Study

Comparing between the concept of nature for the prototype in each of the architectural presentations as well as the theological religious presentations determines the basic difference between them, where the concept in the architectural presentations focuses its search on the beginning or the origins, unlike the concept nature in the theological presentations where the idea of perfection is focused upon.

For architects, perfection is uncovered in the beginning in a form of shadowy images unlike the religious typology where perfection is found in the future, in the form of symbolic figures more than could be found in origins (Mann: 1991: 125).

Dennis Alan Mann in his presentations covers the most remarkable characteristics of the religious typology that are convenient to the architectural typological thought and which can be briefed in the following aspects:

- First: Religious typology is characterized by being intellectually oriented towards history through the concept of repetition, which means reappearing in a new form. It doesn't represent historicism, revivalism or even eclecticism, but it represents a form of millennialism(50) which states that the future will be more perfect by means of investing the available potentials by the past. So, the idea of the new beginning of the prototype seeks perfection and represents one of the strongest features of typology at which perfection entails reinterpretation in its own time and place along with its own technology and for the sake of its special cultural state (Mann: 1991: 133).
- Second: Religious typology meets with architectural typology in its interest in invented apparent orders by means of prototype in one hand, and by the meaning of the cultural unit from the other as being central principles for maintaining the stable and well-established society. Thus, religious typology excludes vagueness, secret forms or meanings as long as it aims at continuation and at the unification of typological relationship parts. This is because that it adapts with the dominant typology in the architectural theory represented by the following typological classes:
- Architectural models types, which represent distinctive imaginable institutional forms.

- Syntactical types, which represent formal perceivable and repeatable models.
- Technological types, which represent common construction models.

These typological classes are characterized by being identifiable in accordance with local and regional situations. They represent architectural typological classes that promote behavior and traditional cultural values. So, typology is user - oriented not a creator - oriented (Mann: 1991: 134).

- Third: Religious typology represents a structural phenomenon. This means the type in the theological perspective represents a main repeated idea of a historical continuity and the prototype allows for many interpretations, relying in the interpretation of the typical code on rational prediction as a kind of symbolic forms or symbolic figures, iconography and other sign orders. Thus, typology accordingly represents a method for constructing sign orders that are perceivable by the intellectual audience. It possess a technique, which aims at conveying an intended message at which owning historical similarities that are known to the audience is a condition (Mann: 1991: 130).
- Fourth: Both religious and architectural typologies are based on real things. Subsequently, type and prototype represent current realistic things found in the relationship between the dependent / independent. So, being dependent in historical correlation and independent in having their own lives, we inherit types, and we make prototypes (Mann: 1991: 134).

2.3.4.f. The Root of Type in William John Mitchell's Study

William John Mitchell defines the concept of tokens as type outputs by deeming that they represent individual physical entities placed in certain time and place. This happens where each token acts in accordance with the type it represents, and tokens are referred to the type itself by virtue of having something common to form for an instance (Mitchell: 1992: 86).

Mitchell explains his concept of type through differentiating between the essential properties and the accidental properties of a thing, at which he defines the essential properties of a thing as representing the common properties between the tokens in a single type. While he defines the accidental properties of a thing as representing the properties that change from token to another within the type, he considers that the essential properties represent the fundamentals that are referred to as the essence of type or prototype. Thereby Mitchell defines prototype as resulting from the abstraction of the essential properties that are similar among the members of a things' certain class (Mitchell: 1992: 87).

Furthermore in his presentations, he differentiates between types of absolute essence, types of relative essence and types of nominal essence, by describing them as:

- Absolute essence: It is a constant and unchangeable essence according to which the demonstration of the essence of something is close to the demonstration of a mathematical or a scientific fact. So, the absolute essence is more concerned with generalities in comparison to peculiarities. He argues that the types in modernism and classicism(51) have absolute essences , and in turn archetypes and prototypes are also considered of absolute essences (Mitchell: 1992 :88:90).

- Relative essence: It is on the contrary of the absolute essence where the essential and the accidental differences are inferred by various techniques. So the relative essence of something simply depends on our concern in a given moment, and types by its virtue are deemed a private case more than being a general one. Mitchell states that the history of architecture introduces the relative attitude to reveal a wide range of diversity in essences' definitions, even within the classical tradition (Mitchell: 1992: 91:92).
- Nominal essence: A sort of definitions identifying things that are called by names where the difference between the essential and the accidental properties is inferred with reference to the alphabetic being used (Mitchell: 1992: 94).

He then continues to point out the importance of types as being the vocabularies of the architectural language used by the designer in solving the designing problem by emphasizing its role in realizing the form and then interpreting it. Mitchell deems that, organizing knowledge within a framework to an order of types enables us reading the architectural drawings, standard models and other descriptions constructed within the worlds of designing. He also argues that, type definitions establish the meanings of the general names and give the structure of knowledge a useful technique (Mitchell: 1992: 100:180).

2.3.5. Critical Vision

Studying the root of type as a concept requires an analytical perspective that rests on familiarity with the historical, social, and the religious facts as well as the other circumstances related to the cultural background of the society during the

meant period of time under discussion. This also includes their reflections on the intellectual structure of the society then and on the cultural architectural products.

Despite all that is presented, those studies are not inclusive in covering all the aspects of the concept, as most of them focused on a limited aspects of the concept which might be ascribed to the nature of the study.

But after presenting all those studies together and throughout the four development periods of the concept, it is ascertained that it has two overlapped levels descending from a single structure equal to its two levels in terms of language and philosophy which is the idea of the prototype that represents the root of type. Moreover, these levels correlate in architecture in the same way language regards the main structures which represent the essence or source, and the language or grammars of architectural prototype where:

1. Essence - Source: The commons among the presentations during the four periods related to the historical evolution of the type concept (Tables: 2.2,2.3,2.4, and 2.5).

Table:2.2: The Most Prominent Aspects Related to the Root of Type - Essence - Source of Architectural Prototype - in Architectural Presentations at the Pre Enlightenment Age Before 1750.

	Essence - Source of Architectural Prototype
Pre Enlightenment	§ An idea. § Mental conception of a materialistic icon. § Original archetypes like; human and legends. § Origins represented by architecture.

(Abdul Aziz : 2007).

Table:2.3: The Most Prominent Aspects Related to the Root of Type - Essence - Source of Architectural Prototype - in Architectural Presentations at the Enlightenment Age 1750 - 1830.

	Essence - Source of Architectural Prototype
Laugier's Presentations	§ A principle that defines architecture essence by means of the basic elements. § Nature system embodied in the primitive rural cottage.
De Chamout's Presentations	§ Natural origins of archetypes such as primitive cottage and tree.
Blondel's Presentations	§ The basic characteristics related to appearance. § The architectural origin.
De Quincy's Presentations	§ Ideal type of an intellectual nature. § Relative type of a materialistic. § Primary origins and reasons such as the nature represented by a primitive cottage.
Durand's Presentations	§ Structural system for formation of basic abstract architectural elements. § Pragmatic facts related to architecture.

(Abdul Aziz: 2007).

Table:2.4: The Most Prominent Aspects Related to the Root of Type - Essence - Source of Architectural Prototype - in Architectural Presentations at the Modernism Age 1900 - 1960.

	Essence - Source of Architectural Prototype
Banham's Study	§ System. § The origin of the object. § The machine is the origin from which modernization derives its principle.
Cantacuzino's Study	§ A principle that meets the destructive needs of the society via wars. § An architectural prototype constructed according to the society needs. § The design is according to the prototype, which is repeated in big quantities by the means of machines.
Bonta's Study	§ Basic, Regulative and abstract models. § Intellectual and pragmatic bases.
Jules's Study	§ Systematic model. § Thinking processes and search for the optimum system. § A symbol in the society.

(Abdul Aziz: 2007).

Table:2.5: The Most Prominent Aspects Related to the Root of Type - Essence - Source of Architectural Prototype - in Architectural Presentations at the Post Modernism Age After 1960.

	Essence - Source of Architectural Prototype
Aymonino's Study	§ The correlation amongst structural, regulative and abstract elements. § The origin is connected to the architecture.
Schulz's Study	§ Real and tangible i.e. expresses its symbolic value. § The original archetypes like a tower or a house. § Appears in works in a shape of a figure. § Using original archetypes originating in symbolic architecture.
Kahn's Study	§ Dual natures that combines both materialistic and intellectual natures. § The origin is connected with previous cultural products. § Merging the tradition with the invention and reviving the symbolic meaning.
Bell's Study	§ Effective principle. § Essential value for the architectural model. § Conceptual tool. § Origins represented by historical and cultural products. § Represents the object, which reflects the symbolic meaning.
Mann's Study	§ Basic formal perceptions. § Structural formal perceptible model. § The origin is related to popular local and regional architecture models. § Represents a system of understandable, interpretable and perceptible relationship.
Mitchell's Study	§ A common basic properties between a set of models representing root of type. § The essence is either an absolute constant or a relative variable. § Related to the vocabularies of architectural language ranging between the whole architectural model and its parts. § Represent a critical language that helps perceiving and then interpreting the shape.

(Abdul Aziz: 2007).

From what can be seen in the structure Essence-Source of prototype, the concept is associated with ideas like: **The collective memory, The mental desire, The supreme cultural ideal and The spirit of the age.**

2. Language - Grammars: presentations varied on how they focus on this structure during the four periods related to the historical evolution of the type concept (Tables: 2.6,2.7,2.8, and 2.9).

Table:2.6: The Most Prominent Aspects Related to the Root of Type - Grammars of Architectural Prototype - in Architectural Presentations at the Pre Enlightenment Age Before 1750.

	Language - Grammars of Architectural Prototype
Pre Enlightenment	§ Connected to the repetition process of the previous traditional shapes of the buildings. § The connection of the type's roots with the architectural categories known on the civilizations levels. § Asserting the role of type's roots in the continuity of architectural traditions throughout history.

(Abdul Aziz: 2007).

Table:2.7: The Most Prominent Aspects Related to the Root of Type - Grammars of Architectural Prototype - in Architectural Presentations at the Enlightenment Age 1750 - 1830.

	Language - Grammars of Architectural Prototype
Laugier's Presentations	§ Represents a principle for architecture construction.
De Chamout's Presentations	§ Non.
Blondel's Presentations	§ Related to the academic classifications in accordance with the formal external appearance of buildings.
De Quincy's Presentations	§ Related to meaning and the ideal. § Represents a base for model construction.
Durand's Presentations	§ Related to the shape formation based on the programmed function of the internal constructs. § Related to the academic classifications according to the formational and structural characteristics. § Asserting the existence of typological changes throughout history.

(Abdul Aziz: 2007).

Table:2.8: The Most Prominent Aspects Related to the Root of Type - Grammars of Architectural Prototype - in Architectural Presentations at the Modernism Age 1900 - 1960.

	Language - Grammars of Architectural Prototype
Banham's Study	§ The root of type is a mean to construct the geometrical shapes in a standard way and which is produced as aggregate.
Cantacuzino's Study	§ Non.
Bonta's Study	§ The functional root of type help the craftsmen in the design process.
Jules's Study	§ The prototype represents the optimum shape of the different uses.

(Abdul Aziz: 2007).

Table:2.9: The Most Prominent Aspects Related to the Root of Type - Grammars of Architectural Prototype - in Architectural Presentations at the Post Modernism Age After 1960.

	Language - Grammars of Architectural Prototype
Aymonino's Study	§ Aims at classifying the architectural systems into formal and style types or regulative and structural types. § The independent prototype is isolated from the historical definition temporally and spatially. § The applied prototype is defined historically, temporally and spatially.
Schulz's Study	§ Its design is a process that invests the basic principles of the shape and the organized space. § The original types or prototype remains constant throughout history. § The functional root of type is realized in specific time and place.
Kahn's Study	§ It is a major factor but it is specific in form construction. § It is an analytical tool, which classifies the architectural works by means of form or function.
Bell's Study	§ It represents an ambiguous motive that activates improvements in the formal technology through the analyzing antecedents. § It is a tool for establishing and expanding architectural traditions. § Aims at reproducing history.
Mann's Study	§ Using architectural models that result in the total formation of the shape. § Using technical and structural root types in the partial formation of the shape. § Aims at reinterpreting history in a new form in accordance with space and time.
Mitchell's Study	§ Used in the field of design due to the fact that they are the vocabularies of the architectural language. § Results from the abstraction of similar characteristics amongst members of the same class. § It is related to models established in specific time and place.

(Abdul Aziz: 2007).

From what can be seen in Essence-Source of prototype, the concept is associated with ideas like: **The cultural species and the Main Regulating Lines or lineaments.**

After presenting all these studies which have discussed the root of type as a whole and as defined linguistically and philosophically, **it can be said that the prototype is the concept through which it can be diagnosed the originality of the cultural architectural product.** This means that the identification in its levels and structures in language and philosophy on the one hand, and the architecture on the other, makes it the concept that can be considered a link between the mental

expression structures and the architectural expressions structure represented by the cultural product itself. This can lead to the emergence of any cultural product in its true form.

But, all above pave the way for Diagnosis of the knowledge gap for all these studies together, which related with the third central question: What is the mechanism -the system- for the concept, which is considered a link between the mental expression structure, that leads to the emergence of any cultural product in its current form, and the architectural expressions structure, represented by the cultural product itself? Which can be considered a deep level of the problem and objective of the study, and chapter three designed to define the special cognitive reality related to the third central question.

CHAPTER THREE

METHODOLOGY: THE THEORY OF ARCHITECTURAL PROTOTYPE

3.0. Introduction

Chapter Three is designed to define the special cognitive reality related to the third central question which will be done in Three Sections. Section One involves the theory of architectural prototype in order to provide the cognitive background of the prototype concept as a comprehensive theory that depends on linking between the fundamental structures of the prototype with what stands behind them. This is what we call the poles that constitute the core of the cultural product, which represented by the spirit of age from one hand, and by the cultural architectural product represented by the cultural species from the other. Section Two involves the explanation of the theory through its poles in particular, in order to provide the cognitive background of the manner in which it is related. This is by showing how the poles connected with the structure of essence - source the architectural prototype, i.e., identifying the core of the cultural product and the methodology of its analysis on the one hand, and the poles connected with the structure language - grammar, i.e., identifying the cultural product and the methodology of its analysis on the other in order to reach to the pillars of the prototype system. Section Three includes a review of the architectural prototype system aspects in order to provide the cognitive background of the manner in which the system operates through its pillars that are represented by what can be termed as the signifier values of the prototype that are represented by the mental expressions and the signified values of the prototype that are represented by the

architectural expressions. Then we reach its procedural-comprehensive definition and the methodology adopted in dealing with it that enables us to formulate the study hypotheses within the vocabularies of the procedural-comprehensive definition.

3.1. The Theory of Architectural Prototype

The study selected some vocabularies of the language such as the concept of the signifier and the signified. Moreover, the study didn't borrow many rules of the language to be applied in the field of architecture directly, but through the bridges that connect the fields of language and architecture.

Language in the field of literature is simple vocabularies that can be put together to form sentences - signifier - and then the receiver interprets them through his symbolic storage which resulted from his comprehension to the rules and regulations of the language. Then meanings are embodied - signified - so that the civilization or the culture is identified through that language, i.e. the language within the field of literature comes in an earlier phase before the civilization or the culture known through that language.

The language, in the field of architecture, is produced through - signified - which emanates from the physical architectural forms, in accordance with which the receiver interpret his symbolic storage that in turn results from the interaction between intellectual, social and cultural factors in the receiver's mind and then the meanings - signifier - are embodied and consequently the architectural language that comes in the final stage which also involves those intellectual, social, and cultural factors.

So,the first step towards recognizing the system upon which the prototype works in diagnosing the originality of the architectural cultural product requires

formation a comprehensive theory through its structures represented by source - essence and language - grammars of the architectural prototype.

As every civilization has poles that constitute the cultural novelty of the cultural product, which is considered the cultural core and all the structures, it forms the concepts that formulate the cultural product. So in order to present any comprehensive theory of the concept as represented by the architectural prototype, we should first identify the correlation between the basic structures of the prototype and the cultural poles, as an identifying concept to the originality of the cultural architectural product.

Subsequently, it can be said that there is an academic significance in the architectural media to recognize the manner in which cultural poles are connected with the basic structures of the architectural prototype, which diagnose the originality of the cultural architectural product when we study the history of architecture. So, it is very important to proffer interpretations of this correlation and eventually reaching the mechanism through which the architectural prototype identify the originality of cultural products, i.e. reaching the architectural prototype system.

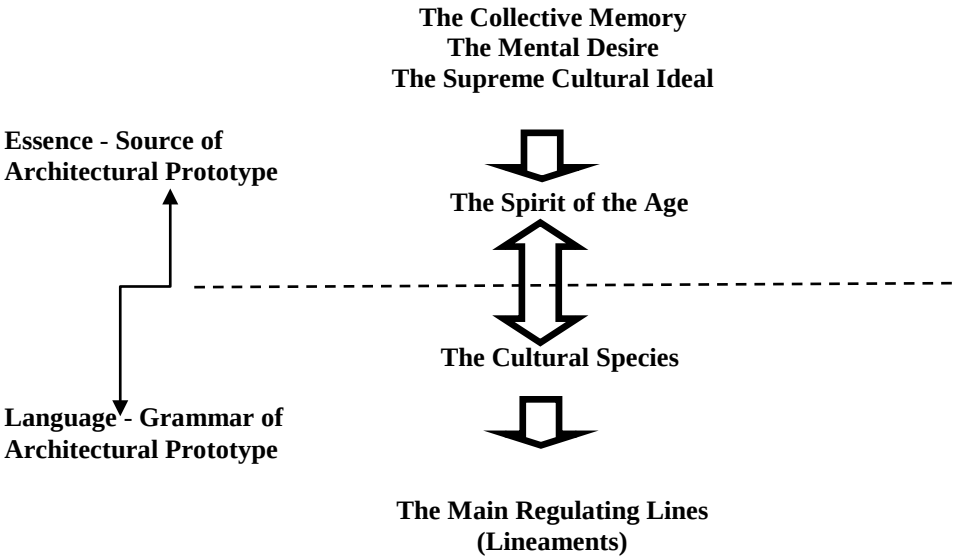
- The First Interpretation: It is important to present explanations of the poles connected with the essence - source of architectural prototype which are the collective memory(52) ,the mental desire, the supreme cultural ideal and the spirit of the age.
- The Second Interpretation: It is important to present explanations of the poles connected with the language - grammars of architectural prototype which are the cultural species and the main regulating lines or lineaments.

The first step to formulate this system depends upon relating the cultural poles with the common basic structure of the architectural prototype as having dual nature (Diagram: 3.0).

This means the theory of architectural prototype can be explained as thus:

- First: Designed to present explanations related to the essence - source structure of the prototype along with the cultural product core poles, without the historical attention concerning how to reach modern terms because there is a set of correlated topics within a hierarchal sequence which might provide these explanations such as the collective memory, the mental desire, the supreme cultural ideal and the spirit of the age.
- Second: It is designed to provide the explanations related to the language - grammars structure of the prototype with the cultural product poles, without the historical attention concerning how to reach modern terms, because there is a set of correlated topics within a hierarchal sequence which might provide these explanations such as the cultural species and the main regulating lines or lineaments. In these two parts, we will work within this formula (Diagram: 3.0): **Spirit of the Age ⇔ Cultural Species**

Diagram:3.0: The Formula of the Theory of Architectural Prototype.



Consequently, the importance of presenting explanations emerges in what could be referred to as the poles that form the core of cultural product on the one hand and the cultural product on the other in order to realize its structural nature through which its diagnosis and measurement technique is inferred, such that all the theoretical aspects are fulfilled in order to reach a comprehensive definition of the prototype and accordingly reaching its system's pillars in section two.

3.2. The Interpretations of the Theory of Architectural Prototype

3.2.1. The First Interpretation of the Theory of Architectural Prototype Associated with the Essence - Source of Architectural Prototype

3.2.1.a. The Collective Memory

The collective memory is provoked by fragments which are coated with memories and personal secrets, that attempt to link the cultural group with the historical continuity of their culture. So the civilization represents the location of the collective memory, where the cultural products become part of its memory. Aldo Rossi also emphasizes the connection of the collective memory with the cultural product (Buchanan: 1982: 50)(Rossi: 1982: 130:131).

Aldo Rossi points out the connection of the collective memory with the civilization, saying *"one can say that the civilization itself is the collective memory of its people, and like memory it is associated with objects and places"* (Rossi: 1982: 130).

This is also because the presentations on the subject assert the connection of the cultural products with the collective and the private events. They aims at

uncovering those events and feelings, and they also stand for a theatre for events and a form of the civilization life (Vitale: 1979: 59).

Through the concept of the collective memory of the civilization, we notice that the cultural product gains its value from its explanatory dimensions and not from its function, because function is changeable throughout time due to its independence from the form. But the form or shape per se provokes feelings inside us and affects the recipient (Rossi: 1982: 29:46).

The value of the cultural product expresses itself with what is called manifesto, constructing what is termed the collective memory of the place, and civilization is the place of the collective memory and it is understood as an integrated whole of ideas that passed through it and contributed to building up the civilization. So, civilization evolves and develops its self concept and idea for itself. Thus, every city has its own idea, as the collective memory is the one which fulfills the unity state of the space of idea and the spirit of the place in it - It’s Genius Loci - (D'Amato: 1984: 163)(Rossi: 1982: 45).

The cultural products have a direct visual effect resulting from certain forms or shapes that explicitly awakens the collective memory, and grant meaning to the civilization by means of bypassing the ritual and ceremonial transclusions with the primary engineering against the matrix of the civilization as a whole (Colquhoun: 1975: 368).

Peter Buchanan asserts the connection of the cultural products concept with the memory, pointing to its influence by the psychological concepts concerning the collective memory and the collective unconsciousness and arguing that the strength of the cultural products lie in their psychological dimension. They lie in that legendary field of the late twentieth century, the collective unconsciousness,

regarding the cultural products connected as being concerned with the memory that exist in the civilization and which lies within the humans in it and which is called the collective memory. This agglomerates the personal and the historical recordation by means of fragments, narrated or decipherable, that remind synchronically, covered with memories and personal secrets. And the dropper like this which provokes memories, represents the cultural idea about its artistic and architectural product. This path, through which Buchanan and others hope to reconnect the cultural group with the historically continuous constants of their civilization (Buchanan:1982:50).

The cultural product becomes more similar with the release of memories from the collective unconsciousness, as it stands for the more collective glimpses and the mental image that possesses the greatest value in the objective world (Buchanan: 1982: 50).

3.2.1.b. The Mental Desire

The basic unit of aesthetic taste is more at the level of the shared culture in any given age and place, because most individuals within such a grouping tend to value the same artistic ideals (Porphrios: 1982: 91:94).

José Rafael Moneo Vallés (1937) the Spanish architect says that the connection of the discipline with the origins of art and architecture. i. e. the unity in the cultural product is derived from the society mental desire to bear the prevalent origins of art and architecture together, especially those origins that extend from the womb of the discipline (Moneo: 1985: 311).

The mental desire and the aesthetic urge are of cultural dimensions as they dominate the thinking and the product of a certain civilization and are the base of the properties of their products. This is what Alois Riegl (1858 - 1905) the Austrian art

historian mentions in his presentations Stilfragen: Grundlegungen Zu Einer Geschichte Der Ornamentik or Problems of Style: Foundations For A History of Ornament that the conscious and unconscious artistic will, which possesses cultural dimensions that constitute the values of the spirit of the age, is the essence of the cultural product emergence (Quintavalle: 1981: 16:19).

The cultural product depends on the participation of certain civilization individuals in a stable mental image to what ought to be similar to it - the cultural product - considering that it stands for a continuous tradition since the ancient civilizations. It includes the symbolic and the initial shapes (Broadbent: 1980: 139).

3.2.1.c. The Supreme Cultural Ideal

The supreme cultural ideal result from different biological situations of human's evolution. This includes different situation, events, social and historical circumstances related to the emergence of the society and all that which contributes to making the ideal rich. Each group of people in the world has its own cultural ideal whose image is reflected in its artistic masterpieces, literary marvels, social conventions, acculturative motion, artistic taste and aesthetic theories (Zuhdi: 1997: 27).

Things and subjects that all societies make, emerge from the collective works within a given cultural framework as the expressions spread in one way or another, and that there is a sharing in an essential content towards innovation and desire to constitute the world to get along with the ideals and what is thought to be within those ideals (Crowe: 1995: xviii).

3.2.1.d. The Spirit of the Age

The mechanisms which constitute the shared mental desire or the aesthetic taste conforms Herder's[53] presentations about the shared spirit. The spirit of the age concept is a very commonly used recently in architecture criticism, although its beginnings were on other literary and artistic levels. The idea came to existence in the Enlightenment Age in the second half of the eighteenth century. One of the most prominent pioneers is Johann Gottfried von Herder who argues that there is an essential unit of the aesthetic taste which becomes common in a single civilization for any given time and place. His evidence is that individuals within one cultural grouping own a shared or common aesthetic evaluation for the same artistic values (Porphrios: 1982: 91:94).

The unit of the basic aesthetic taste is the shared spirit and it originated from the cultural characteristics of any time and place. According to this concept, the genuine cultural product turned to be the aesthetic expressive mode of any given civilization (Gelernter: 1995: 164).

Gottfried von Herder calls the main unit of the aesthetic taste volksgeist[54] which means the shared spirit. This shared spirit stem from the cultural characteristics for any time and place, and that the developments in the concept of the spirit of the age, as used nowadays is a result of the German Idealism in the nineteenth century. This emergence is thanks to Johann Gottlieb Fichte, the theorist of ego transcendental and he called the contemporary name of zeitgeist the spirit of the age as opposed to volksgeist or the shared spirit for Johann Gottfried von Herder (Gelernter: 1995: 164:165).

Friedrich Schelling tackles the concept concerning the exactitude of Johann Gottlieb Fichte's concepts by which he interprets the human creation process or the

act of creation - where creation is confined to Allah alone - Friedrich Schelling says that *"there is a cosmic or universal ego which is represented by mind, this ego is absolute and a group of individual finite minds contribute to it"*. (Gelernter: 1995: 196).

The absolute ego is the one that creates the physical world. It means that the physical world is a visual representation of the absolute, and the absolute is an unseen for the physical world, and it has the self - organizing and self - development abilities motivated by the powers of self creation and innovation. This way the emergence and the development of the cultural product is interpreted as a product of the self regulation and development of powers for the absolute and the universal ego and represents the visual representation of it in the physical world (Gelernter: 1995: 196).

If all man's inventions are the reflections of the absolute, then the concept of the age spirit for the German idealists expresses a spiritual entity in one of its development moments. While Friedrich Schelling gives the priority to intuition in constructing the absolute making, it outweighing the logic - which is a romantic theory the believes that the shape exists in the designer's unconscious - his contemporary Georg Wilhelm Friedrich Hegel possesses purely rational point of view, as he believes that there is a high mind which creates or innovates the physical world, and that is considered an ideal rational view (Gelernter: 1995: 197:198).

Hegel is considered as the first who used the zeitgeist concept in interpreting and analyzing the history of the art. He regards the art as the material presentation of the absolute idea, and that contradicts with the classical view which considered the art as an imitation of the nature. Art and architecture in Georg Wilhelm Friedrich Hegel's opinion, stand for the society's view to the world. So, they cannot be studied

in isolation from their cultural contexts as the artist or the architect - through his idea - adapts the external world and so acquires what is called weltanschauung[55] or worldview , and it lies in the conscious and unconscious construction as they express their idea in a sensed material form which is affected by the cultural context (Gelernter: 1995: 198)(Porphyrios: 1981: 96:97).

Hegel continue to argue that we don't represent the spirit of our current age only, but we represent the spirit of all the past ages, and that history operates as a continuing developmental link that links all the objects in a harmonious whole (Porphyrios: 1981: 99).

The aforementioned explanations for the poles that form the core of the cultural product related to the structure essence-source of the architectural prototype show in its own nature form, what can be called the signifier values of the prototype, which represent the mental expressions that form the core of the cultural product.

The mechanism of reaching these mental expressions depends on the kind of the cultural product core in accordance with its nature and particularity.

3.2.2. The Formula of the Theory of Architectural Prototype

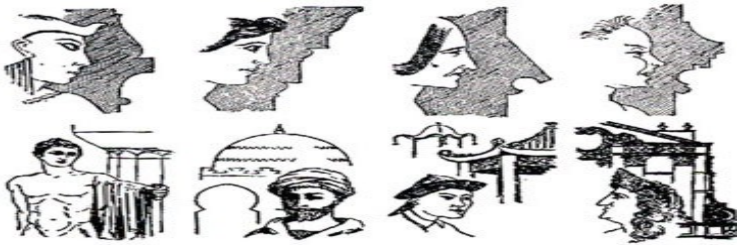
The spirit of the age concept prevailed as a concept that interprets the evolution of the cultural species in several of the presentations of the twentieth century theorists. In his book The Style of Ornament, Speltz Alexander confirms that the cultural species is the product of a certain period of time and not one person's product, and that the cultural species is the shape or form which reflects the spirit of the age with all its dimensions and effects. Throughout his study of the development of ornament over the history, he elucidates how the spirit of the dominant age and the

ideas and beliefs of the society can influence the kind of ornament that is produced (Leathart: 1945: 37).

In Paul Frankl's perspective, the cultural species is the product of a creative intellectual process in which various cultural components react, and it is cannot be produced unless the civilization reaches maturation period. Christian Norberg-Schulz confirms this trend by pointing out that the cultural species is a way to express culture and socialization. Herbert Pothorn however views the cultural species as a way to express the history of change in man marsh and the history of change in human desire components in accomplishing individuality (Gelernter: 1995: 226:272) (Frankl: 1968: Intro.).

Although Wojciech G. Lesnikowski agrees with them in terms that the cultural species is the way according to which the development can be made at any given period of time, he considers it as a technique to express skill, craft and the public taste for a certain period of time or certain individuals with a given period of time in the history. Meanwhile, Bruno Zevi (1918 - 2000) the Italian architect, historian, author and editor argues that *"the greatest achievements of the cultural species is its ability to find the logical balance between the human values and technologies in one organic unification"* (Pothorn: 1971: 7:8)(Lesnikowski: 1982: 10) (Figure: 3.0).

Figure:3.0: The Cultural Species is the Form Which Reflects the Spirit of the Age.



(Source: Zive: 1993: 173).

As language is one of the most important means of expression, some theorists interpreted the cultural species on this basis. Robert Arthur Morton Stern (1939) the American architect , who may have been the first architect to use the term postmodernism for example, considers the cultural species, not unlike the component of style in languages, to be consisted of two basic components which are the syntax, as represented by form, and the rhetoric with the kinetic content that has a special synthetic rules (Lesnikowski: 1982: 13)(Stern: 1984: 183:184).

The cultural species is just like the languages, as it develops throughout time and adapts with the new circumstances. In 1960, Ernst Gombrich[56] presented a similar theory to the concept of Robert Arthur Morton Stern. He regards the cultural species as the languages that are different in the styles of their articulation and in the questions that submit explanations about it (Gelernter: 1995: 284).

Demetri Porphyrios (1949) the Greek architect and author argues that the cultural species expresses the tectonic order of architecture. The tectonic is the aesthetic value resulting from the inner potentiality of the construction. It is a term which becomes familiarly used to express the aesthetic function of the construction, which results from the realization of the suggestive relationships between the strength and the form. From Purverse's point of view, it is the celebration of the construction of language and the meanings of values accomplished by its constructional organizing (Curtis: 1996: 284)(Porphyrios: 1996: 94)(Webster's New World Dictionary: 2003: 1496).

The art and architecture are cultural phenomena and independent practices which represent a group of aesthetic values. They are the results of the historical and cultural depth, and that art and architecture acquire their meanings from these values and that the cultural species is the product of certain cultures are inevitable in its time

and place, and it is not judged outside its real cultural context (Colquhoun: 1996: 209: 205).

The cultural species in its essence is an unseen absolute form and it exists in the universal mind of the group of individual minds. It is represented visually in the physical world, and that the individual minds contribute in building up by the individual minds. Therefore, any of these minds, and in at any moment, possesses part of this spirit. This way the similar view of a group of artists or architects and their resort to use the same cultural species in a certain period of time can be interpreted. All of this contributes to the focus as a product of the spirit of the prevalent age. The spirit of the age is of a metaphysical nature which emerges from the cultural characteristics of time and place (Figure: 3.1).

Figure:3.1: Cultural Species is the Product of Certain Cultures Inevitable in its Time and Place.

(Source: Zive: 1993: 191).

3.2.3. The Second Interpretation of the Theory of Architectural Prototype Associated with the Language - Grammars of Prototype

3.2.3.a. The Cultural Species

In his book Types and Vocabularies : The Logic Of Architecture: Design, Computation, and Cognition, Mitchell says that *"the concept of the cultural species means identifying a group of works of the cultural products that share similar artistic or architectural characteristics, which are recognized as belonging to the same group"* (Mitchell: 1992: 83:95).

He asserts that each cultural product has specific cultural properties of two types; essential and accidental properties, and that the artistic or architectural works which belong to the same artistic or architectural group will have the same main properties which constitute their cultural species but are different in their accidental properties (Mitchell: 1992: 83:95).

The concept of the architectural species ensures the formal organizing of the product and the elements forming it, which is reflected in Cicero(57) words about the necessity that temples should have symmetrical ceilings with cuspate ends. For example, when a child draws a house, his drawing will be limited by certain symbols that refer to a house. He draws a rectangular façade and above it, a symmetrical triangle with a door and a window. This abstraction of symbolism for the child reflects an essential human need to typify, i. e. isolating the essential important for an object that we distinguish and give an identity to anything as soon as we see it (Crowe: 1995: 160:161).

We find in the different symbolic languages multiple denotations for the roof, like containment and residence. The primitive dwelling or the cottage represents the space embrace of the individual and the small-numbered group within a material

entity that represents the primary form of architecture. This is also true of the single space in which the ceiling is unified with the floor as well as the internal and external space by various models of different environments. The spatial pattern could be of conic section or spherical just as the case with the Indian tents, or half-spherical like the dwellings of Eskimo(58), the rectangular or conic section like the primary settlements in England, or as a complete basement such as the houses in the marshes(59) south of Iraq (Merza: 2000:54).

The fundamental characteristics are the ones which distinguish a certain architectural school from the other, or distinguish an expression from the other. We can see that there are implicit rules which guide each work, and within these rules any expression or cultural product can act with its latent innovative power without losing the coherence with the typological basis. It is rare to write down the rules that control the artistic groups because applying them is implicit in the nature of the artistic work. But when we want to assert the product of the complicated art form such as architecture, then we need to deduce the rules that lead to the creation a new architecture, i. e. we deduce a basic species rules to ensure performing consequent works in a way that is consistent with the artistic features of that generative species (Crowe: 1995: 158).

A number of architects stress this including Quatremère de Quincy, who divides the architectural characters into two types; constant which is the general and essential that expresses human and nature in every time, and space non space-temporal that possesses a power of influence through realizing the main characteristics of the product. This happens while the changing character is related to the kind of the product. It is special and expressing the time and space throughout

dealing with the characteristics of the byproducts of the work (Colquhoun: 1989: 249).

The basic characteristics generate the basic form which is known through the relationship between the whole and the parts. This relationship is considered constant in each cultural species**,** because without it the form changes the material only, and without it the form becomes inharmonious and inefficient. Moreover, the difference in cultural species as Aristotle(60) believed is merely a difference between the whole and the part, i. e. the form in a single type is constant except the changes added the more or the changes presented the less and this means that the cultural quality emerges as a result of the harmony between the part and the whole, specifically from the correct relationships of the elements that constitute the total form of the cultural product, which are determined through a matrix of regulating lines (Thompson: 1971: 15:273)(Smith: 1978: 30).

The cultural species is timeless(61) and non-spatial as well as develops or change. It is an idea and not a material fact and the architect or the artist cannot form cultural species**,** but he can only form something that reflects a given cultural species. The cultural species is the dominant thought of the society in which the whole life of the people is embodied. So, the cultural is not a tradition that is followed in general nor a transitional pattern of a certain age or style, but it is a continuing tradition which is not restrained by time (Crowe: 1995: 161)(Ardalan: 1973: xi).

The notion of the species is very different from the modern concept of style. The cultural species is not temporary but its style is. The artist or the architect with a stable character selects a species without respect to the historical sequence through which the temporary or spatial - temporal styles developed. The concept of artistic and architectural species is widely spread in the visual and formal scope of the

culture. Also, the styles as part that constitutes the solution is a qualitative in itself, and that identifying the decisions concerning the species of the product, i.e. the recognition that precedes everything through its formation is done through the basic form which relies on the main regulating lines (Crowe: 1995: 161: 164).

3.2.3.b. The Main Regulating Lines - Lineaments

The abstract features become the abstract form if they feature with a profound cognitive level and they become the features of expressing the visual elements of the form. If we understand architecture as a language, then its elements can be linked to form the sentence. These elements include the mass, space and elements of the deeper cognitive level as the main regulating lines or lineaments (Bonta: 1980: 28:30).

Through abstract mechanism it could be that the most important of them is putting the main lines, or as Alberti(62) called lineamenta. This involves innovating a matrix of lines with a three dimension space for the purpose of unloading the whole shape of the cultural, artistic and architectural product and the relationships of the forming elements with each other, where the main regulating lines or lineaments determine the locations of the main elements of the product. It is because they put the required number for them in addition to their relationships with each other (Crowe: 1995: 170).

Norman Crowe points out that manipulating all the parts forming the cultural product is done through the main regulating lines or lineaments, which are controlled by certain rules. It prepares according to laws in terms of their relationships with each other and their relationship with the product as a whole. These rules belong to the aesthetic theoretical constructs that arise in a certain cultural frameworks (Crowe: 1995: 164).

Alberti describes those main regulating lines of the cultural architectural product relatively as a factual and natural issue. This can be expressed by modern platonic or Pythagorean terms, but viewed for practical purposes as a geometrical matrix consisted of lines which the cultural product and its elements settle. So, the main regulating lines can be viewed as a means for the Platonic pureness and perfection as an intellectual construct in this view, considering the architectural and cultural product approximate visual and a definite detail of the unseen integrated world which controls the creation in the material world. This dual behavior is aimed towards the main regulating lines as a means to encourage the precautious designer and to strengthen the holy implication (Crowe: 1995: 170).

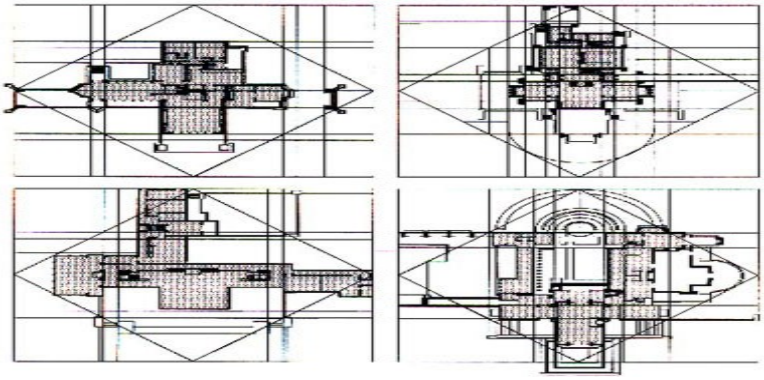
The ancient builders, architects and sculptors could construct the whole and its parts simultaneously by means of the main regulating lines or lineaments in order to create a harmonious architecture. Scrutinizing the main regulating lines or lineaments in the product means excavation in its constructive ideas, correlation points and the symmetries that formulate its design (Langhein: 2002: 7).

The main regulating lines - lineaments - rarely connect the parts, and their reading is not an attempt to resolve a riddle, as we are all prepared with an unconscious ability to distinguish and discriminate them. The most common regulating lines that are associated with the main constructs of the cultural architectural product are the main diagonal connection points and the constructive radii, as the eye of the beholder connects with any element that is placed along those lines with the whole (Langhein: 2002: 7)(Figure: 3.2).

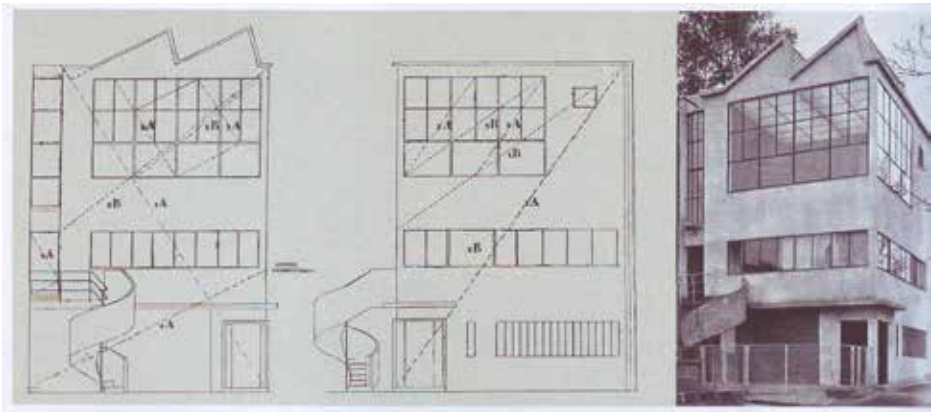
The analyses of the main regulating lines to the plans or the façades are done through identifying the diagonal and main lines of the cultural architectural product in addition to identifying all the main points in the construct. This is what is called by

Charles-Édouard Jeanneret, better known as Le Corbusier (1887 - 1965) the French architect, designer, urbanist, writer, and painter, as following Auguste Choisy (1841-1909) the architectural historian the regulating lines because the purpose, in general, is to show the repetition of the similar forms in the architectural product construct. Le Corbusier describes the construct as being directed by these lines. The art historian Heinrich Wolfflin used these analyses of the classical buildings, especially those which date back to the renaissance age, as he stressed that the geometrical systems were smartly applied in their original designs. Others studied the shape of vessels, face proportionality and the human shape using the same technique (Steadman: 1971: 226:227)(Figures: 3.3, and3.4).

Figure:3.2: Study the Form of Plans and Elevations Using the Technique of the Main Regulating Lines - Lineaments: The Eye Connects with Any Element That is Placed Along Those Main Regulating Lines - Lineaments.

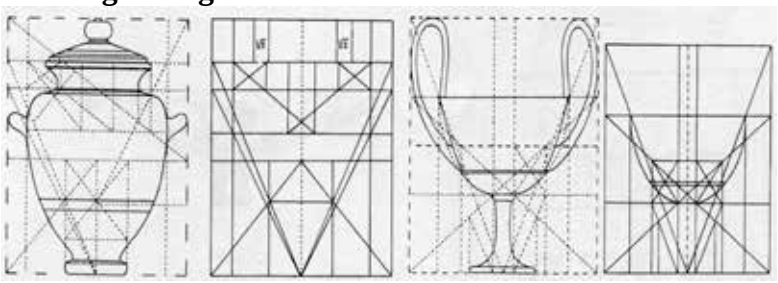


(Source: Crowe: 1995: 171).



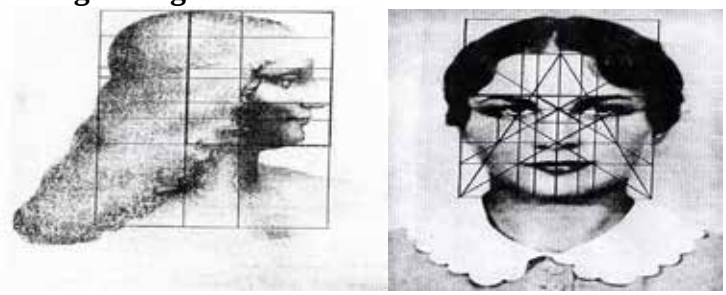
(Source: Nebos: 2011: 708).

Figure:3.3: Study The Form of Vessels Using the Technique of the Main Regulating Lines - Lineaments.

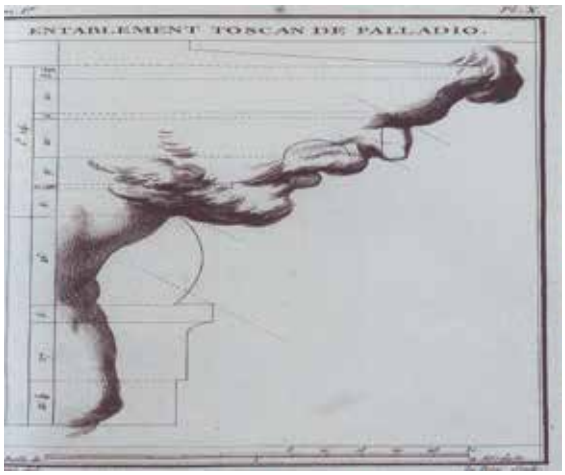


(Source: Ghyka: 1977: 133).

Figure:3.4: Study of the Form of Face Using the Technique of the Main Regulating Lines - Lineaments.



(Source: Ghyka: 1977: 102:104).



(Source: Nebos: 2011: 307).

The concept of directing a given system in constructing the artistic and architectural products and maintaining the styles of this system were known in the various historical periods. Although the real system or order may change from time to time, their humanitarian principles and their values for the architect remain as they

are. These go farther than identifying the cultural form to give the dimensions of the product a reasonable aesthetic value, and they can unify the pluralism of elements visually by means of making all its parts belong to the same family of the main regulating lines (Ching: 1996: 285).

It is not possible to deny the existence of the main regulating lines in the present time because they represent the natural or the divine laws. Le Corbusier says that *"the golden sections shapes are the shapes which are sought by a good architect with consciousness"*. According to Socrates, they remind us with our eternal soul, and these lines can be studied as elements in the artistic and architectural measurement only through discovering evidence of the constructs on which they rest and not by classifying the reasons of their innovation. Moreover, they create the value of the cultural, artistic and architectural product because they generate relationships amongst their main constructs.

So the importance of presenting the analytical insight for the studies that formed the basic theories of the main regulating lines in the cultural product becomes evident in order to provide the background knowledge for its analysis.

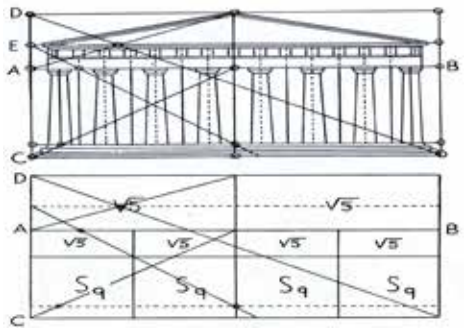
3.2.4. Techniques of Analyzing the Main Regulating Lines

Analyzing the main regulating lines by the main regulating lines is characterized with three techniques, which rest on Vitruvius' presentations in his book entitled The Ten Books on Architecture(63) and Plato's writings about the dynamic symmetry(64) They are:

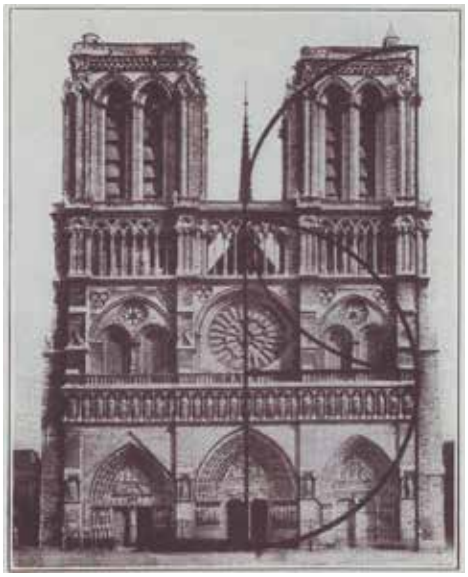
3.2.4.a. Hambidge's[65] Technique

This technique presumes using what he calls the dynamic rectangles adopting the harmonic geometrical analysis which is based on discovering the harmonies within the basic components of the formation in order to find the generative unit of constructing the cultural product. This is done through three essential mechanisms which are: Diagnosing the core of the formation, diagnosing the joints of the formation and diagnosing the structure of the formation (Ghyka: 1964: 40:41)(Figure :3.5).

Figure:3.5: Hambidge's Technique: The Dynamic Rectangles of the Main Regulating Lines - Lineaments.



(Source: Ghyka: 1977: 138).



(Source: Nebos :2011: 707).

The most important studies that can be enlisted in this technique are:

1. Yasser Tabbaa: Geometry & Memory.

   He suggests that the architecture - the whole, and ornament -the part, depends largely on the geometrical principles that range between simple grids and harmonized parts, and that was the reason that make those lines legislate the architectural thoughts (Tabbaa: 1988: 23).

2. Renata Holod: On the Transmission of Architectural Knowledge.

   She illustrates that the net model represents the essential constructing unit and it is essential in the formation of the cultural products (Holod:1988:5:6).

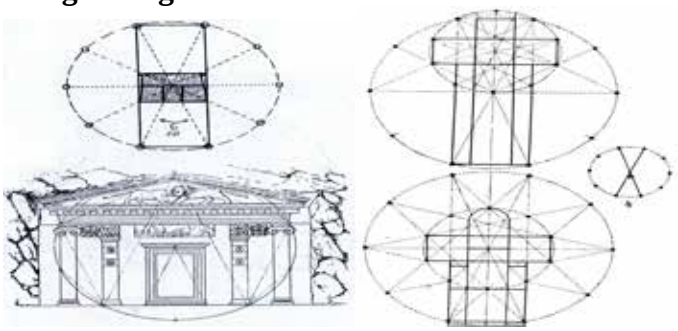
3. M.S. Bulatov: Geometric Harmony in Architecture of the Middle Asia.

   He emphasized that the main regulating lines comes from two basic motivations; the first comes from the generative unit of the architectural product, while the second translates the geometrical relationships which reflect during the formation of those lines by adopting a module unit (Bulatov: 1988: 5).

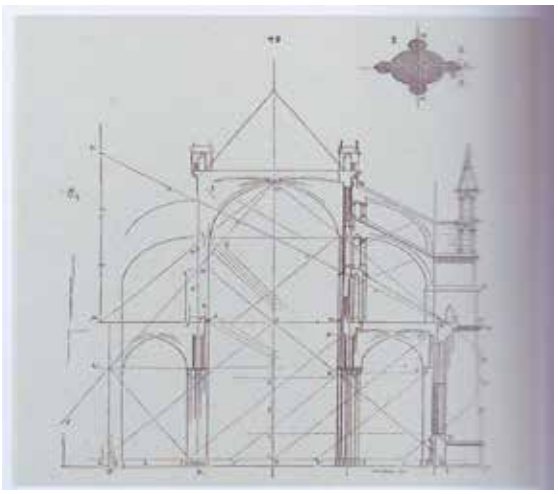
3.2.4.b. Mossel's Technique

This technique relies on the secondary divisions of what he calls the circle of orientation. He sees that there should be a center for formation and the intersections between its diameters determining its important points. On the other hand, the formation has a general structure, which is formed through the relationship of its masses with its spaces. This could be determined based on the implied divisions through diagnosing the core of the formation, diagnosing the joints of the formation and diagnosing the structure of the formation (Ghyka: 1964: 42)(Figure: 3.6).

Figure:3.6: Mossel's Technique: The Circle of Orientation of the Main Regulating Lines - Lineaments.



(Source: Ghyka: 1977: 144).



(Source: Nebos: 2011: 352).

The most important studies that can be enlisted in this technique is:

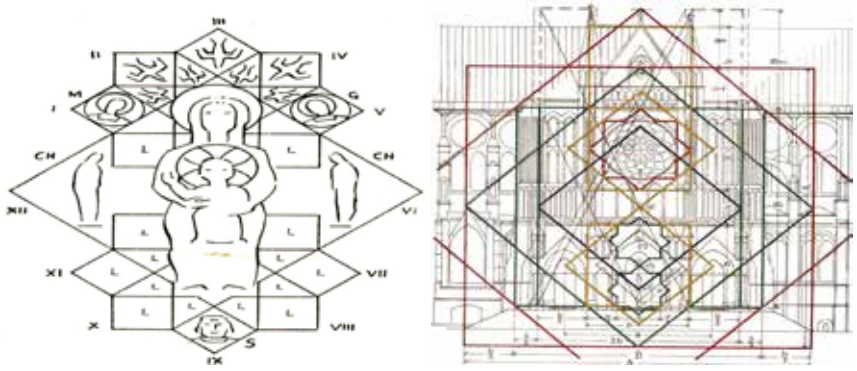
1. Issam El-Said: Geometric Concepts in Islamic Art.

   In his study EL-Said concludes that, through the main regulating lines, we can find the uniqueness of the theorization regulating of each of architecture and art. So, the formal theory enabled the artists to create freely and soundly away from the complications of the numerical system. Thus reaching complete internal relationships was possible between the part and the whole within the formation disregarding the measurement (El-Said: 1976: xi).

3.2.4.c. Lesser's Technique

This technique presumes that the main regulating lines of the icons and their shapes are the ones which control plans, sections and the facades of the sacred geometry(66) and that the main shape of forming the iconic and the architectural constructs was simplified to the simple shape resulting from the intersection of three square positioned diagonally. This enables determining a center of the formation while the intersections define the important points in it. But the formation has a general structure that is formed from the relationship of space with the non-space, which can be identified through separation using the negative photo technique. This is done by adopting three main mechanisms, they are diagnosing the core of the formation, diagnosing the joints of the formation and diagnosing the structure of the formation (Lesser: 1964: 203)(Figure: 3.7).

Figure:3.7: Lesser's Technique: The Squares Intersecting of the Main Regulating Lines - Lineaments.



(Source: Lesser: 1964: 198).

The most important studies that can be enlisted in this technique are:

1. Matila Ghyka:The Geometry of Art & Life.

   Ghyka tackles the main regulating lines in time and place. In his study he argues that they are the most difficult and most important concepts that can not be presented accurately. So, he either mixes it with the concept of

proportion from which they logically come, or - especially when talking about the proportions in sum - with the series of the distinguished ratios related to each other. Then we have the more sophisticated concept which was called Vitruvius by the Greeks Symmetria, as well as the commodulatio by the renaissance architects (Ghyka: 1977: 1).

2. Norman Crowe: Nature & The Idea of a Man-Made World.

   In his study, Crowe concludes that we intuitionally understand the malformation as an incongruity within harmonized groups. Albert sees malformations as the universally-recognized ugliness and that the classical stipulated that the cultural product should be harmonious just like the universal man. They show a logic and constancy between all the parts and in a harmony with the whole in relation to our traditional understanding and our expectation based on it, and that the results of the visual systems that are dependent on the human shape and the geometrical shapes express themselves. So, it is possible to apply the main regulating lines on the cultural product for any culture in order to analyze the compositional priorities of their essential patterns (Crowe: 1995: 99).

3.2.5. Composing and Analyzing the Main Regulating Lines

Vitruvius indicated that the main regulating lines is the main generator for making all the parts in the cultural formation harmonious, as they characterize a certain system that becomes a major base to formulate the cultural form, via diagnosing the core of the formation, the joints of the formation and the structure of the formation (Tansey: 1991: 11)(Vitruvius: 1960: 80).

The rules of constructing and analyzing the cultural products are extremely complex, and most of these rules are related with the main regulating lines because the most important considerations of the construction and analysis are the main core, the joints and the structure of the formation (Crowe: 1995: 172).

The real effects in using the main regulating lines result from the general methods in which the components used in any artistic or architectural formation are identified, and the mechanism that generate the appearance regulating it are determined. The most important of these are the ones related to the main regulating lines (Steadman: 1971: 238).

The main regulating lines assert the existence of a symmetrical mode that achieves harmony and congruence between the part and the whole, and that is done through their mechanisms which have its own place in the total harmony of the cultural form (Ghyka: 1977: 114:115).

The dominant feature of most of the systems used in the fixation of the main regulating lines is an attempt to create the visually viewed scheme through the system between the part and the whole, which rests on identifying the core, joints and basic structures of the construct (Steadman: 1971: 222).

The main regulating lines emerge through certain mechanisms and Issam El-Said asserts that they depend on the core, joints and basic structures of the construct, and that these mechanisms rely on the system between the part and the whole (El-Said: 1976: 115:127).

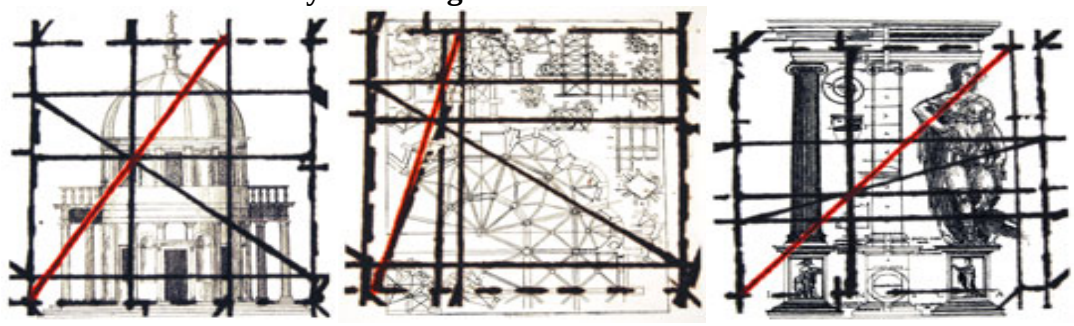
In the geometrical analysis, the main regulating lines are related to identifying the basic components of the cultural product. Subsequently it is the diagnosing the core of the formation, the joints of the formation and the main

structure of the formation, and this method is complete and has never changed (El-Said: 1976: 3).

The analysis of the main regulating lines related to cultural, artistic and architectural products is the geometrical basis for analysis, which involves the mode of the main regulating lines formation on geometrical basis. This is because using the numerical scale in analyzing the main lines of the geometrical or architectural product can have inaccurate results because it is based on the geometrical basis. So, the geometrical analysis provides a suitable criterion that can be used to measure the lines and construct or analyze the main lines of the cultural, artistic and architectural products (El-Said: 1976: 117).

The main regulating lines in the cultural products were studied and used as a geometrical means to analyze in various topics. But, it is still possible to classify these topics into three levels represented by the level of the independent architectural unity - whole - the level of the independent architectural unit parts -parts- and the level of the independent architectural part of the unit - part - (Robertson: 1945: 82) (Figure: 3.8).

Figure:3.8: The Main Regulating Lines - Lineaments - lineamenta - Achieves Harmony and Congruence Between the Part and the Whole.



(Source: Franz: 2007).

In the process of composition and analysis, components of the cultural products are divided systematically into the basic parts which constituting them, that the smaller unit can be designed in terms of its relation with the total cultural and architectural product. This way everything can be derived from the whole and not the contrary and all the characteristics become harmonious with the cultural, architectural and artistic species. If the methodology adopted is to start with a collection of components and then generate the product from this collection, the result would be only the assembly of the components and not unifying them as a whole. The methodology put forward for composing the main regulating lines is similar to making a decision about what we would like to say and then using the rules and vocabularies that are suitable for communicating the idea we want to talk about. Also, as the language has vocabularies and rules - grammar - the components of the artistic and architectural formation should be brought together in accordance with their traditional relationships and characteristics in order that the phrase would be correct. If any of the components is omitted, that will seriously influence the properties of the cultural formation property as a whole, just like we do when we make a blunder concerning the location of a word in a certain sentence or when we make a grammatical mistake (Crowe: 1995: 172).

So, we find that all the studies that deal with the geometrical analyses of the cultural architectural formation agree on the fact that main regulating lines are the base for every cultural architectural formation of the part and the whole. Consequently, we can conclude the mechanism of the forming and analyzing the main regulating lines of the cultural architectural formation in the following:

- Dividing the cultural architectural product into its essential components.
- Defining each component according to its nature.

- Analyzing the main regulating lines through the core, joint and the structure of the cultural architectural product formation.

The aforementioned explanations for the poles that form the core of the cultural product related to the structure language - grammars of the architectural prototype show in its own form what can be called the signified values of the architectural prototype, which represent the architectural expressions that form the cultural product.

The mechanism of reaching these architectural expressions depends on the apparatus of the main regulating lines of the cultural architectural product.

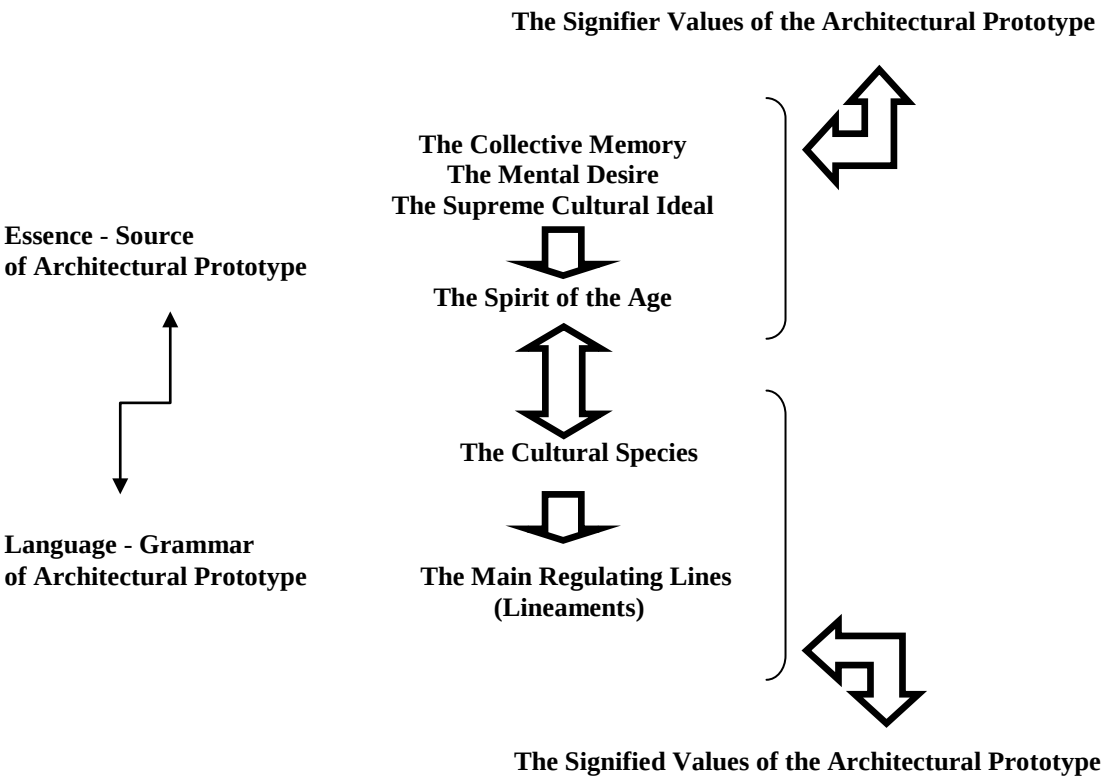
3.3. The System of Architectural Prototype

We can say that the system of the architectural prototype divides in its structural nature into two parts:

- The First Part: It represents the signifier values of the architectural prototype, which are related to the source - essence of the architectural prototype as main structures.
- The Second Part: It represents the signified values of the architectural prototype which are related to the language - grammars of the architectural prototype as main structures.

This thesis will regard them as the two basic pillars to test the system and apply the mechanism they operate with (Diagram: 3.1).

Diagram:3.1: The Pillars of the Theory of Architectural Prototype.



So, the series of discovering the mechanism by which concept operates, represented by the architectural prototype idea and which identifies the originality of the Mesopotamian cultural and architectural products through their main structures that enables us to formulate the following procedural definition.

3.3.1. The Procedural Definition

Type is an innovated mental mean to extract the reality and making it recognized by the mind and reproduce it. Because it remains stable, it was characterized with stability, generality, modifiability and development according to the cultural variables.

Also, it is a mental attempt to find an objective common conception of the objects or the relationships together in order to obtain a certain kind of control,

understanding and prediction. It is not necessary to be clear and apparent easily, but it could be completed and concealed to be inferred by the mind in various means.

Moreover, it is one of the basic ideas to deal with the cultural traditions and heritages, diagnose the originality of their products and communicating with them .It has its own rules with two interrelated and superimposed levels linguistically, philosophically and architecturally , which when together, it becomes the prototype that constitutes the root of the type. It has the power of concept, through which we can deal with the cultural history in general and the architectural history in particular, and at the same time diagnosing the originality of the historical cultural products.

This represents a link between the physical and the metaphysical facts with the cultural product, giving it a physical form via its abstract structures represented by the essence - language that are associated with the signifier values - mental expressions - which represent the poles that formulate the relationships that emerges between the material meanings associated with the civilization on one hand, and the signified values - architectural expressions - which represent the poles that formulate the relationships emerges between the expressing the common material meanings in the civilization on the other.

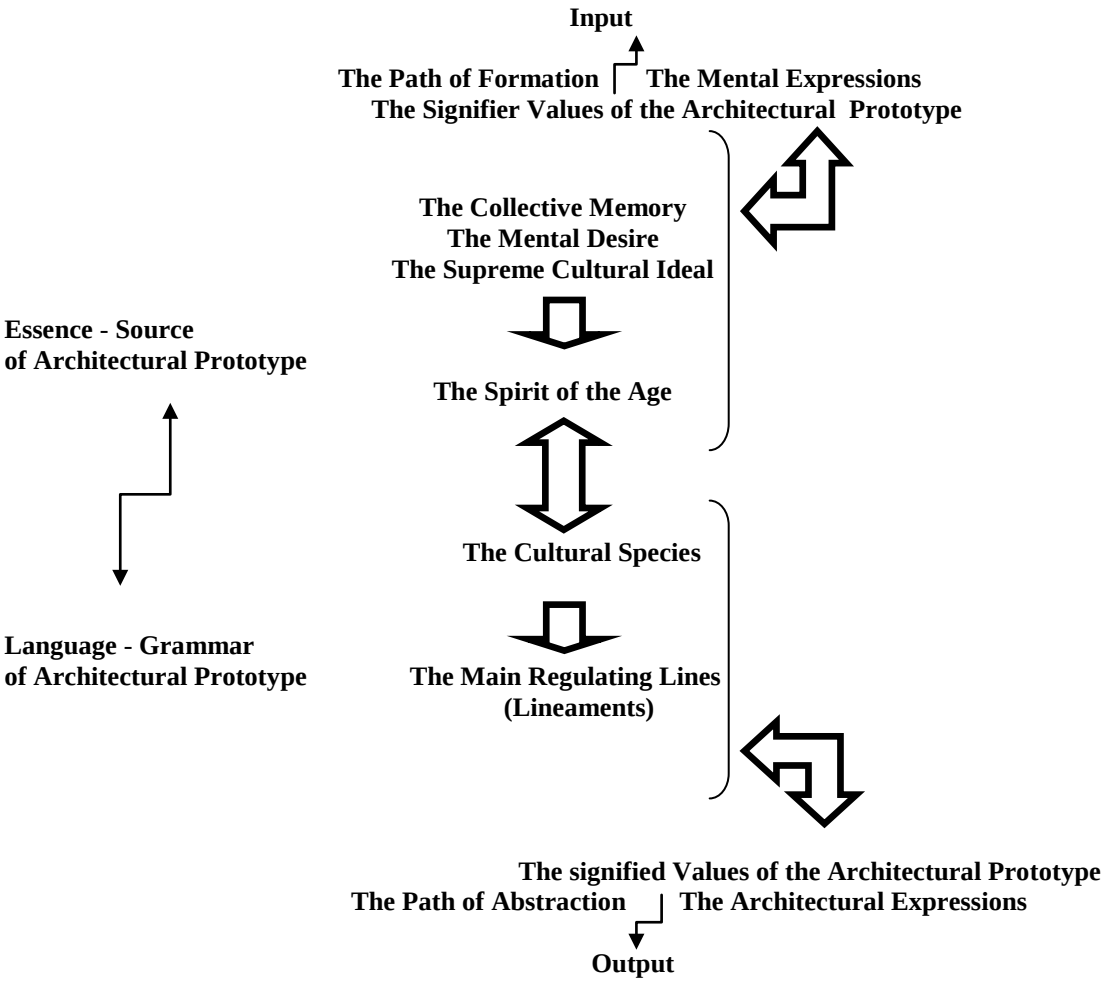
So the architectural prototype has two explanations:

- The First: Is related to the mental -metaphysical- products of man that we can be classified as one common kind amongst certain cultural group.
- The Second: Is related to the material -physical- products of man that we can be classified as one common kind amongst certain cultural group.

The architectural prototype operates with a certain mechanism that attempts to associate these two explanation with it, and that gives it the feature of an abstract motive with a profound perception of the cultural product in general and the architectural product in particular.

In its comprehensive concept it is a system that determines the relationship between the whole and the parts of the cultural product components, and that formulates the basic rules of the cultural product or its internal system .So, the prototype represents the way through which the form of the cultural product can be explained and the diagnosis of its originality can be accomplished (Diagram: 3.2).

Diagram: 3.2: The System of Architectural Prototype.



3.3.2. Testing the System of Architectural Prototype

The first step in the process of testing the system of prototype is to build the default form of study in the light of what has been reached in procedural definition of the prototype and the methodology employed in dealing with it.

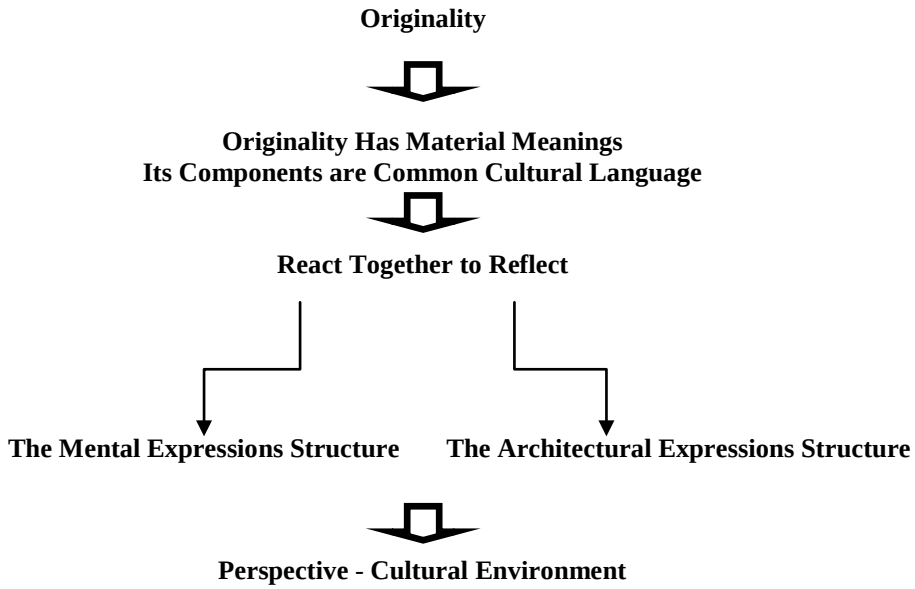
3.3.3. The Central Hypotheses

A central hypothesis will be employed for the study within the items of the procedural definition that has been formulated:

The idea of the architectural prototype is a concept that reveals the originality of the architectural product, which is governed by stern grammars. It bears perennial and universal facts which are totally original, and can be manifested through metaphysics and physics as they are concealed and preserved within and behind it. And the limitations lie inside us if we were not able to see their essence.

It can be said that the people belonging to one civilization have common items for the cultural core formulating the cultural product. Hence, they speak and reflect the common cultural language of a generation or subsequent generations in cultural product called the historical originality, and that means reflection of the immaterial product - mental expressions structure - represented by the core of the Mesopotamian cultural architectural product on the material product - architectural expressions structure - represented by the product itself, within its perspective - cultural environment (Diagram: 3.3).

Diagram:3.3: The Common Language of Civilization.



So, the hypotheses of the study is**,** there is a congruence between the non material product - mental expressions structure or the signifier values of the architectural prototype - represented by the core of the Mesopotamian cultural architectural product and the material product - architectural expressions structure or the signified values of the architectural prototype - represented by the product itself, within its cultural environment, that gives it the status of originality.

And this hypothesis is in harmony with the three approaches, as the verification process associated with the central hypothesis is linked to:

- **First:** Revealing the structure of the mental expressions - The signifier values of the architectural prototype - of the cultural core forming the cultural architectural product of Mesopotamia.
- **Second:** Revealing the structure of the architectural expressions - The signified values of the architectural prototype - of the cultural architectural product of Mesopotamia.

- **Third:** Demonstrating the congruence between the mental expressions structure and the structure of the architectural expressions of the Mesopotamian civilization.

Where the architectural prototype operates - in its nature - as a middle link between the first and the second points through its mechanism that try to correspond between the Mesopotamian cultural and architectural mental expressions structure with the structure of architectural expressions of the Mesopotamian cultural product, and consequently revealing the originality, i. e. the verification of the third approach. Where, chapter four designed to define the special cognitive reality related to the first and second point in testing the central hypothesis.

CHAPTER FOUR

THE CASE STUDY

4.0. Introduction

Chapter Four was designed to define the special cognitive status which is related to the first and second point in testing the central hypothesis and that was done in Six Sections. Section One involves a definition about the Mesopotamian civilization in general and formulation of the borders for the non-material - metaphysical - man - made products in Mesopotamia, which provide the cognitive background related to its cultural core, which is represented by the Mesopotamian myth of creation. Section Two involves the cognitive background for the technique of the myth analysis designed in harmony with the nature of the core and its particularity represented by the anthropological matrix analysis, to uncover the main structures of the myth. Section Three involves a review of the Mesopotamian myth of creation (Sumerian - Akkadian and Babylonian - Assyrian) and the technique of its analysis to reveal its main structures represented by the matrix analysis, to the structure of its mental expressions - results of analysis - which represent the signifier values of the prototype. Section Four includes a definition of the Mesopotamian cultural product in general and temporal-spatial and characteristic boarders formation for the material - physical - product, in order to provide the cognitive background related to their architectural - cultural recognized products, which were presented by the symbolical monumental architectural product for Sumerian - Akkadian and Babylonian - Assyrian cultures. Section Five involves a review of the Mesopotamian cultural product: Temenos, Temples, Palaces, Stele, Bas-Relief , and cylinder seals to

provide a cognitive background about their basic components as a preface for the Section Six. Section Six includes the technique of analysis for the Mesopotamian architectural cultural product to uncover its basic structures represented by the main regulating lines whose items - mechanisms - constituted the application to reach the structure of its architectural expressions - analysis of results - that represent the signified values of the architectural prototype.

4.1. Mesopotamia

Mesopotamia from the Ancient Greek: Μεσοποταμία: "[land] between rivers"; Arabic: بلاد الرافدين (bilād al-rāfidayn); Syriac: ܒܝܬ ܢܗܪܝܢ (beth nahrain): "land of rivers" is a toponym for the area of the Tigris - Euphrates river system, largely corresponding to modern-day Iraq, northeastern Syria, southeastern Turkey and southwestern Iran (Finkelstein: 1962: 73:92).

A civilization(67) whose ruins became extinct and their cities turned into heaps, we see the small russet hills which represent the Mesopotamian past barely reminding the one with the former grandeur. If a Mesopotamian came back to life again, he wouldn't have been troubled much to see his civilization in ruins, because he always knew that man's life is short and whatever human did will fade away. The center of the existence and its meaning, for that human, are very far away from the human and his achievements, very distant from the tangible things; but they are within powers that govern the cosmos (Frankfort: 1954: 145).

The question here is; how did the Mesopotamian civilization reach this mentality? It is a difficult question because the mentality of a certain civilization is the product of complicated and interrelated ways of life which challenge the accurate

analysis. So, we will be indicating to one factor that seemed to play a vital role, which is the nature[(68)] (Frankfort: 1954: 146).

The Mesopotamian civilization thrived in a nature in which we see a coercive and violent element as the Tigris and the Euphrates might flood regularly or irregularly resulting in the destruction of man's dams and flooding his farms. Also, there are blazing winds that make man choke with dust and strong rains which change the solid land into a sea of mud and preventing the man from movement, making him paralyzed. In Mesopotamia nature doesn't control itself but it dominates, by means of its cruelty, the will of the human making him feel nothingness towards it (Frankfort: 1954: 147).

The mentality of Mesopotamia civilization reflects all that because there is nothing that tempts the human to be proud of himself when he contemplates the powers of the nature. So, he stands in the midst of such powers and see how weak he is and realize, when he sees terror near him, that a gigantic power might manipulate him. So, worry and apprehension dominate him and feel his impotence concerning the tragic possibilities of existence (Frankfort: 1954: 147).

The experience of the nature that created this state of mind was directly expressed in the idea of the cosmos for the Mesopotamians. They were not unaware of the magnificent rhythms of the cosmos. In the cosmos, they noticed a non-chaotic system, but this system was not secure to be trusted because they felt it as having a crowd of the conflicting individual wills with possibilities, wills that are full of the possibilities of chaos as they confront individual mighty powers in the nature, powers that only follow their own fantasy (Frankfort: 1954: 148).

In accordance with this, a Mesopotamian did not consider the universal system as a given thing but as something that has been achieved and it is achieved by

many individual universal wills; each of which is insolent and terrible. So, he made his understanding to the cosmos express itself in the image of assembling and unification between the wills, i.e. as social systems. In brief, this human considered the cosmic system as a system of wills (Frankfort: 1954: 148).

The Mesopotamian understanding of the cosmos in which he lives has taken its special shape when the shape of the civilization integrated in general, i.e. at the times of the primary writing at the mid of the fourth millennium B.C.. When the primary writing emerged the image of the civilization changed completely as if the Mesopotamian civilization crystallized totally overnight. The essential shape, or the structure within which Mesopotamia lives also changed under the domination of that structure. That would pose the most profound question later, evaluate itself and the cosmos for all the subsequent ages and emerges with complete growth in its main characteristics (Frankfort: 1954: 148:149).

Then, if assumed that the Mesopotamians' idea about the cosmos are as old as the Mesopotamian civilization, we have to ask how could they reach this idea, because our cosmos is, mostly, composed of materials with no life and no will and this makes us wonder about what the Mesopotamian individual considered the phenomena surrounding him and the world in which he lives.

Cosmos doesn’t seem to the primitive man, as to anthropologists(69) confirmed, inanimate or vacuum; but it seems living and that a primitive man might confront any of nature’s phenomena in any moment not as him but as you.

The “you” in this confrontation reveals individualism, traits and will which might result from the repeated experience of the relationship between "the ego" and the "you" a personal view with no contradiction. So, objects and phenomena surrounding the human individual connect on different levels. They are alive,

somehow, and have their own will and each has a definite character. Hence, we face what Andrew Lang[70] described saying: *"that mixture whose elements can't be sorted, in which people, animals, plants, stones and stars live on the same level of character and survival. That blends which motivates the human to contemplate the existence and the cosmos so that his poetic wisdom takes its shape"* (Frankfort: 1954: 151).

One of the most important and simplest examples about the Mesopotamian's contemplation of the simple assets of the cosmos and his poetic wisdom towards them is his vision to the power of wheat[71]. Wheat, for the Mesopotamian has special powers. Man resorts to it as if it is a living - being. So, when the man offers a quantity of wheat to conciliate one of the universal wills, he addresses the wheat by saying:

I am sending you to my indignant god, my indignant gods.

Reconcile me with my indignant god, my indignant gods.

(Frankfort: 1954: 152).

One of the important examples about the Mesopotamian contemplation of the assets of the cosmos is the concept of death[72]. Death means the transition to the other world, a miserable, dark and unclear world; a world in which the dead knows no happiness and he might suffer hunger if his living relatives won't offer sacrifices in addition to the presence of the evil spirits and evil gods in the netherworld which torture and torment the dead who are abandoned by their relatives. All this made the Mesopotamians less confident of their future because their god is far away from them and the other world would not provide them with comfort in return of their sufferance in their life on the earth (Contenau: 1981: 123:126).

We find the most important contemplation of this concept in the revolt against death which was embodied in the epic of Gilgamesh[73].

The first transformation point in human knowledge was from the physical material world which man had lived towards other potential worlds which are still unknown for him and out of the scope of his senses and his reason. These worlds manifested in the first confrontation challenges represented by the concept or the phenomenon of death, which gave him a motivation and an incentive to deeply penetrate his contemplations, the limits of his knowledge and his questions about the possibility of the existence of another outside his spatial domain and temporal dimension. Later on this idea constituted the concept of the edge or the Critical threshold, and the concept of the ultimate edge that cannot be bypassed: Oceanus(74) which means the ultimate limits or the limits of things (Al Guesbi: 2005: 10).

Then the human interest changed into the metaphysics and the theological research. Gelernter mentions that 10000 years ago, the first dead was buried and that was as the first spark of the of the consideration and belief in the life after death and the universe system in general as well as a reason to express the symbolic and religious meanings (Gelernter: 1995: 36).

In relevance to that, man started to speculate his creation and coming to existence at the beginning before he dies and be buried, in search of what might maintain and sustain his life, or immortalizes him and protects him, at least, from any undesirable change. This obliged him to attempt to scrutinize the origin of objects - things - and their values, and that was the beginning of his knowledge. So, man started to search for universal values to believe in and for high ideals to submit to, which have the traits of consistency and persistence or at least the anticipated changes within his estimation and prediction around him. Then the eternal question emerged, the question about the possibility of the existence of any fact such as the

creator, the material and about the essence of this fact, its nature and its place. All that was as a serious attempt to realize the origin and the fact (Al Guesbi: 2005: 11).

From all that, a conception formed inside us, and we had a better understanding of the universal beliefs and the high values in Mesopotamian civilization. The Mesopotamians developed ideas about the Great God to explain what was going on around them including natural and humanitarian processes like the birth and the death of the creatures. They attributed these events' processes to their great god. They, also, developed a system of myths(75) to portray the system of origins as the origin of their gods and their (the gods') motivations. So, focus was on the other immaterial world of the gods instead of focusing on their - Mesopotamians - material world they live (Gelernter: 1995: 38).

4.1.1. A New Vision

We conclude that every civilization has its own core which constitutes its traditions, heritages and cultural products which reflects man's point of view concerning his existence. After reviewing the points of view related to understanding the Mesopotamian cultural core, we see that the myth of creation(76) has formed man's point of view concerning his existence.

So, attention was paid on the essence and on ascending from the material values to the immaterial sublime values. This way, the view of the Mesopotamian man resulted in a kind of a relationship between him and what he considered as the grand cultural ideal relying on the unity with the existence because the Mesopotamians considered the existence as an image of the high cultural example and that their view to existence granted the nature of their knowledge a special

dimension as they represented the elements of knowledge in which the influence of unity with the visions of existence reflected.

As a result, we can say that the Mesopotamian myth of creation is the core which constituted the traditions, heritages and cultural products. So, it is important to present an analytical view of the myth in the relevant literatures in harmony with the nature of the cultural core and its particularity. This is represented by adopting any mechanism to reach the mental expressions of the cultural core depending on their kind and their nature.

4.2. Interpretation of Culture Core

4.2.1. The Origin

In 1725, Giambattista Vico(77) published the book of Scienza Nuova or The New Science, and had thought that its publication represented a serious event although everything was calm then. The science that Giambattista Vico suggested was not more than the human science. The book was a modeling of the natural science of Galileo Galilei(78) and Isaac Newton. Giambattista Vico aimed at achieving for the human science what the renaissance age accomplished in terms of the natural sciences. So, his goal was, in brief, the construction of human's physics (Hawkes: 2003: 9).

The central point of the new science is manifested in Giambattista Vico's realization that what is called the man of the very early civilizations was discovered, with sound evaluation, that this man was not ignorant nor barbarian(79). On the contrary, man had an innate poetic wisdom which regulated his responses towards

the circumstances and formulating them as symbol and myth metaphysics (Hawkes: 2003: 9).

Giambattista Vico argues that the physics of man is tightly connected with the mythology[(80)] which includes developed and mature methods to know the facts and abstraction and encoding them. Giambattista Vico says:*"From this it is clear that the first science that should be learned is mythology or interpreting the myths as all the histories of societies begin with myths"* (Hawkes: 2003: 9).

With sound interpretation, myths become the history of the early societies which were all and everywhere poetic in nature, because their standing systems, as Giambattista Vico thinks, took us to the poetic history of mythology. Thus all the myths have their own roots in the real and general experience of those societies and they represent their attempts to impose an acceptable humanitarian form on them. This form emerges, as Giambattista Vico argues, from the human mind itself and the shape of the world that the mind realizes becomes natural, identified and real (Hawkes: 2003: 10:11).

It can be said that man forms myths and social systems and makes the world practically as he sees it and consequently he builds himself. This process of making involves continuous creation of the acknowledged iterated forms that we can call now the construction process. Giambattista Vico sees that this process is a clear, permanent and innate humanitarian feature, which has a continuous impact on the creation of social systems in particular, and as a result of its repetition, then its results and products are predictable (Hawkes: 2003: 11:12).

We can say that the permanent and important humanitarian feature is manifested in the poetic wisdom talent that shows itself as the ability and the necessity to generate myths and I insist here, and the same Giambattista Vico did too,

that it is necessary to have a common mental language in the nature of human systems in any civilization. Through this language the essence of things - objects - that exist in the social life is recognized similarly and expressing it will be through various-aspect adaptations. The mental language shows itself as it is the extensive human ability that builds up the constructions and submits its nature to the building requirements. Hence, we can consider the talent of the poetic ability as a structural talent. It is a principle that determines the way of all the human life. To be a human you should be structuralistic(81) first (Hawkes: 2003: 12).

4.2.2. The Savage Mind(82): Bricoleur and Engineer

The concept of the poetic wisdom, which creates myths and which motivates response to the human world is the main principle of Levi-Strauss's(83) ideas and that, of course, connects him with Giambattista Vico and this is confirmed by his ultimate goal represented by the construction of a comprehensive science of human and his main belief that societies made themselves. The only difference is that the making process is less conscious and less flexible. The same interest is related with Karl Heinrich Marx's thought and Strauss, himself, admitted this relatedness when he said *"the famous saying of Marx that man makes his own history but he does not know that"*, explains history firstly and anthropology secondly (Hawkes: 2003: 29).

Levi-Strauss discerns that language is the first distinguishing feature of man and at the same time it is the first model of the civilization phenomenon that distinguishes man from other creatures Levi-Strauss mentions in his book Tristes Tropiques(84) who says a human says a language and a society (Hawkes: 2003: 29).

The central question that emerges in a situation like this is the question posed by Levi-Strauss: Isn't it possible to study the different aspects of life including

religion and arts through the common elementary structures and if this was the case, then studying the poetic wisdom, for example, will be a clear model suitable for analyzing the civilization in general (Hawkes: 2003: 29:30).

There is a certain kind of communication or contact between the members of certain civilization, and every cultural product becomes a partial expression of the total civilization, which is eventually understood as a gigantic language or as one poetic wisdom. So, if we find this common structure in more than one aspect, then we will have the right to conclude that we have reached an important realization of the unconscious attitudes of the society or the civilization in question (Hawkes: 200: 30:31).

The best way to identify the common structures of civilization is Levi-Strauss' presentation and analysis of a specific system that determine the myth and this way is the monstrous mind system (Hawkes: 2003: 31).

The mythical system Levi-Strauss uses is beneficial in balancing the important variations on all the historical, geographical, social, ritual, religious and philosophical levels. So, the monstrous mind or, in other words, the multi-feeling mind, which is capable of responding to a certain circumstance on more than one level at the same time, constructs, as Levi-Strauss says, "*common structures that help understanding the civilization somehow, and with this respect we can define the monstrous mind as the one which relies on deduction"* (Hawkes: 2003: 46:47).

The myth is described as a verbal form of the art, and Levi-Strauss says that *"it is an efficient means to obliterate time, i.e. it operates through the history as entities that give their constant shapes information that is higher than any content. In fact, it can be said that music and myth consist totally of the shape and extend their*

roots in the past and the present, in another level of their existence which is the non-temporal immortal - eternal - level" (Hawkes: 2003: 53).

Such anthropological school opens the door wide to the idea that all the societies constitute their own facts according to mental or psychological principles and that these societies reflect, later on, these facts on all what the real world might be (Hawkes: 2003: 50).

Levi-Strauss emphasizes that in the past, myths were submitted to explanation methodologies which fully contradict with each other. With the very nature of the myths, people saw them as collective dreams or a basis for rituals or as a result of a kind of aesthetic activity and they considered the myths' characters as embodied abstractions or heroes with a nature higher than ordinary men's nature and as gods who descended from heaven. None of the interpretations can be accepted because these interpretations undermine the value of myths, making them on the level of children's games, and denying any developed relationship with the world and the with the society which originally generated these myths (Hawkes: 2003: 36).

Ultimately, Levi-Strauss's attention is focused on the extent to which myths' structures prove that they are really generative, i.e. they generate new structures, and that they reflect the contents of the civilization members on the level in which they can overcome the distinction between the nature and the civilization. So, his goal, as he says, *"is not manifesting the way in which human thinks of the myths, but the way in which myths think of human and he is strange from them. The unconscious structure of the myth submit itself to analyze its phenomena, and thus the myth shrinks to a limited number of recurrent elements which are of great original structural and constructional importance"* (Hawkes: 2003: 36).

Whether myths were created by individuals or myths were borrowed, their structures will be the same and through them the symbolic function is fulfilled. There are many languages, but there are very few laws that fit all languages. The collection of all the myths will require enormous number of big books, but they can be summarized if we choose from the diversity of characters' few primary functions (Hawkes: 2003: 36:37).

On the one hand it seems that anything can happen within the sequence of the myth as any trait can be attached to a subject, and we can find a relationship between any two subjects. With the myth, everything is possible, but on the other hand this apparent randomness fades in front of the amazing similarity between the myths collected from very different spots. So, if the meaning of the myth was not expected, then how can we interpret the fact that myths are similar to a great extent in all civilization in different locations (Hawkes: 2003: 37).

4.2.3. Myth Analysis

A myth has apparent ties with the language. In order to define the myth we should narrate it because it is part of the human speech and so its analysis can be an extension of another field which is structural linguistics(85). In fact the measure is not very accurate, because we cannot simply consider a myth as a language, and to preserve its particularity, we ought to be able to explain that it is similar to the language and it is, as the same time, different from the language (Hawkes: 2003: 37).

Levi-Strauss points out that however ignorant we are about the language of the people and the civilization in which a myth emerged, the myth will always be a myth for any reader in the world as it is because its material will not be reflected in its style, not in its original music or its linguistic structures, but it will be reflected in

the story that narrates it. So, the myth is a language that operates on a high level that the meaning practically succeeds in starting off from the linguistic background on which it usually rules (Hawkes: 2003: 38).

In addition to that, consistency between the meaning of the myth and its content can also be a complicated linguistic system and there should be a consistency - compatibility - between the unconscious meaning of a myth - the problem it seeks to resolve - and the conscious content which it invests to reach that result or the climax(86). Anyway, we shouldn't conceive that this compatibility is a kind of mirror images, as it can - the compatibility - be closer to transformation in shape and content (Hawkes: 2003: 38).

Starting from this point, Levi-Strauss rested on two basic hypotheses concerning myth analysis. They are:

- First: The meaning of the myth doesn't lie in the separate elements it constitutes, but in the way the elements get harmonized.
- Second: Language in the myth reveals certain characteristics above the ordinary linguistic level.

So, myth is like the language, which consists of constructional components which can be distinguished in the ordinary language, but it is different as it belongs to a more complex and sophisticated system that enables calling them as total constructional units or main structures (Hawkes: 2003: 39).

Levi-Strauss suggests that the myth always operates on two axes, like the orchestra does in order to create harmony and intimacy. For the orchestra to give meaning, we should read it consecutively through one of the axes a page by page, from left to right, and we should read it synchronously through the other axis on which all the signs and notes are written vertically and so it forms a total blending

unity, i.e. a band of relationships. And when we hear any myth narrated, then we encounter the music piece line by line consecutively. When we listen to a solo player in a Jazz music band, we infer, from his performance, the original series of the notes, which means the melody from which the piece was extracted and that will surely explain the melody (Hawkes: 2003: 40).

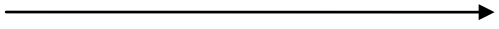
Levi-Strauss puts forward his interpretation of the piece of Oedipus myth(87) and surely this interpretation is worth to be fully quoted, where the myth with be dealt with as an orchestra if it is considered a one direction series, and our mission will be the correct rearrangement. We confront a series of the type: 6,4,3,2,7,4,2,1 (Hawkes: 2003: 41).

What is required is rearranging the similar numbers together -the one with the one, the two with the two and so on- and the result will be the following (Diagram: 4.0):

Diagram:4.0: Matrix Analysis of Myth.

	a	**b**	**c**	**d**	**e**
a	**1**				
b		**2**			
c			**3**		
d				**4**	
e					**5**

Path of Telling the Myth



We Tell the Myth Diachronically But We Understand the Myth Synchronically.

We will attempt to apply this on Oedipus myth, (Diagram:4.1). We try several arrangements for the main structures until we find one of them to be

harmonious with the bases mentioned above. Let's assume, for the sake of discussion, that the best arrangement is the following: although the arrangement will be, definitely, better with the assistance of a specialized person in the Greek myths (Hawkes: 2003: 41).

Diagram:4.1: Matrix Analysis of the Oedipus Myth.

Polybus looks for his sister Merope who is raped by Zeus.		
		Cadmus kills the dragon.
	Female Spartans kill each other.	
	Oedipus kills his father Laius.	
Oedipus marries his mother Jocasta.		
	Eteocles kills his brother Polynices.	
Antigone buries her brother Polynices despite prohibition.		

Path of Telling the Myth →

(Source: Hawkes: 2003: 42).

This way, we find three columns, each of which includes several relationships that are relevant to the same subject. So, if we had to narrate the myth, then we will ignore the columns and read the rows from left to right and from the top to the bottom. But, if we wanted to understand the myth, then we would have to ignore the consecutive dimension top to bottom and read it from right to left, column by column considering that each column constitutes a unity per se (Hawkes: 2003: 42:43).

The myth pays attention in a civilization that believes in the human originality, to the ability to find an acceptable move between the theory and the practice as human beings exist as a result of the unity of man and woman. I think that

Levi-Strauss sees that he found a way for analysis which enables us to see from the shape of the myth to another shape, so that the myth reveals a necessary logical means for this process in which we create the reality of the society. As a result, such analysis will be quick in the levels of those sorts which are unconscious to the idea that support our opinion concerning the world and its formation. The logic of the mythical thought derived from those sorts would not appear tightly connected with what we consider an ordinary Aristotelian logic with scientific trait. But this logic in the Aristotelian thinking, as Levi-Strauss deduced, is as accurate as the modern logic, because man thinks, and his thought never advanced as much as it discovers new fields on which it's never changing powers are applied (Hawkes: 2003: 44).

4.2.4. Vision in Depth

From all this I conclude that the anthropological analysis of the myth, represented by the matrix analysis, gives a clear image about the main structures forming them. So, excluding any of these structures results in an imbalance for the myth and that makes it lose its particularity because these structures are original in the track of narrating the myth, and they also represent the structure of its mental expressions which have intensive meanings through which we can infer the cultural core of the society which formed it. So, the importance of adopting this system becomes clear in revealing the structure of the Mesopotamian myth of creation, along the way to reach its mental expressions which represent the signifier values of the prototype in the third section.

4.3. The Mesopotamian Myth

The Mesopotamian thought involves many myths related to the essential aspects of human life and related to the cosmological with focusing on the earlier fundamentals of the universe, the problems of its evolution, regulation and the creation of the human being and others. In this context, I see that two main trends come to the surface the Sumerians - Akkadians' trend and the Babylonians - Assyrians trend[(88)]. The main difference between them is related to the origins of objects and their existence in the universe.

4.3.1. The Sumerian - Akkadian Myth

The Sumerian myth - the second half of the third millennium B. C. - talks about the creation of the world beginning from the first primordial - aquatic. Depending on a number of Sumerian texts (not complete) we can rebuild the Sumerian legend of genesis. For the complete text of the Sumerian legend of genesis and its references, (Kramer: 1961)(Frankfort: 1954)(Dalley: 2009) and (Speseir: 1969).

In The Sumerian Myth, we read:

Sumerian Genesis: The major source for the Sumerian conception of the creation of the universe is a Sumerian poem entitled Gilgamesh, Enkidu, and the Nether World.

Once upon a time there was a huluppu-tree, perhaps a willow. It was planted on the banks of the Euphrates; it was nurtured by the waters of the Euphrates. But the South Wind tore at it, root and crown, while the Euphrates flooded it with its waters. Inanna, queen of heaven, walking by, took the tree in her hand and brought it to

Erech, the seat of her main sanctuary, and planted it in her holy garden. There she tended it most carefully. For when the tree grew big, she planned to make of its wood a chair for herself and a couch.

Years passed, the tree matured and grew big. But Inanna found herself unable to cut down the tree. For at its base the snake "who knows no charm" had built its nest. In its crown, the Zu-bird -a mythological creature which at times wrought mischief- had placed its young. In the middle, Lilith, the maid of desolation, had built her house. And so, poor Inanna, the light-hearted and ever joyful maid, shed bitter tears. And as the dawn broke and her brother, the sun-god Utu, arose from his sleeping chamber, she repeated to him tearfully all that had befallen her huluppu-tree.

Now Gilgamesh, the great Sumerian hero, overheard Inanna's weeping complaint and chivalrously came to her rescue. He slew the snake "who knows no charm" at the base of the tree. Seeing which, the Zu-Bird fled with his young to the mountain, and Lilith tore down her house and fled to the desolate places which she was accustomed to haunt. The men of Erech who had accompanied Gilgamesh now cut down the tree and presented it to Inanna for her chair and couch.

What did Inanna do? of the base of the huluppu-tree she made an object called the pukku (probably a drum) and of its crown she made another related object called the mikku (probably a drumstick) and gave them both to Gilgamesh, evidently as a reward for his gallantry.

And because of the cry of the young maidens the pukku and the mikku fell into the nether world, evidently through a hole in the ground. Gilgamesh put in his hand to retrieve them but was unable to reach them, he put in his foot but was quite as unsuccessful. And so he seated himself at the gate of the nether world and cried.

Gilgamesh: The Beginning of the Text:

Tablet VII

My pukku, who will bring it up from the nether world?
My mikku, who will bring it up from the "face" of the nether world?
My master, why dost thou cry, why is thy heart sick?
Thy pukku, I will bring it up from the nether world,
Thy mikku, I will bring it up from the "face" of the nether world.
If now thou wilt descend to the nether world,
A word I speak to thee, take my word,
Advice I offer thee, take my advice.
Do not put on clean clothes,
Lest the (dead) heroes will come forth like enemies;
Do not anoint thyself with the good oil of the vessel,
Lest at its smell they will crowd about thee.
Do not throw the throw-stick in the nether world,
Lest they who were struck down by the throw-stick will surround thee;
Do not carry a staff in thy hand,
Lest the shades will flutter all about thee.
Do not put sandals on thy feet,
In the nether world make no cry;
Kiss not thy beloved wife,
Kiss not thy beloved son,
Strike not thy hated wife,
Strike not thy hated son,
Lest thy "cry" of the nether world will seize thee;
(The cry) for her who is lying, for her who is lying,
The mother of the god Ninazu who is lying,
Whose holy body no garment covers,
Whose holy breast no cloth wraps.
O Father Enlil, my pukku fell into the nether world,
My mikku fell into the nether world;
I sent Enkidu to bring them up to me, the nether world has seized him.
Namtar (a demon) has not seized him, Ashak (a demon) has not seized him,
The nether world has seized him.
Nergal, the ambusher, who spares no one, has not seized him,
The nether world has seized him.
In battles where heroism is displayed he has not fallen,
The nether world has seized him.
Gilgamesh: "Him who has one son hast thou seen!"
Enkidu: "I have seen."
Gilgamesh: "How is he treated?"
Enkidu: (Answer broken)
Gilgamesh: "Him who has two sons hast thou seen?"
Enkidu: "I have seen."
Gilgamesh: "How is he treated?"
Enkidu: (Answer broken)
Gilgamesh: "Him who has three sons hast thou seen?"
Enkidu: "I have seen."
Gilgamesh: "How is he treated?"
Enkidu: ". . . much water he drinks."

(Kramer: 1961)(Frankfort: 1954)(Dalley: 2009) and (Speseir: 1969).

The Structure of Origin

Tablet IX

Gilgamesh: "Him who has four sons hast thou seen!"
Enkidu: "I have seen."
Gilgamesh: "How is he treated?"
Enkidu: "Like . . . his heart rejoices."
Gilgamesh: "Him who has five sons hast thou seen!"
Enkidu: "I have seen."
Gilgamesh: "How is he treated?"
Enkidu: "Like a good scribe, his arm has been opened, He brings justice to the palace."
Gilgamesh: "Him who has six sons hast thou seen?"
Enkidu: "I have seen."
Gilgamesh: "How is he treated?"
Enkidu: "Like him who guides the plow his heart rejoices."
Gilgamesh: "Him who has seven sons hast thou seen!"
Enkidu: "I have seen."
Gilgamesh: "How is he treated?"
Enkidu: "As one close to the gods, he . . ."
Gilgamesh: "Him whose dead body lies (unburied) in the plain hast thou seen?"
Enkidu: "I have seen."
Gilgamesh: "How is he treated?"
Enkidu: "His shade finds no rest in the nether world."
After heaven had been moved away from earth,
After earth had been separated from heaven,
After the name of man had been fixed;
After An had carried off heaven,
After Enlil had carried off earth,
After Ereshkigal had been carried off into Kur as its prize;
After he had set sail, after he had set sail,
After the father for Kur had set sail,
After Enki for Kur had set sail;
Against the king the small ones it (Kur) hurled,
Against Enki, the large ones it hurled;
Its small ones, stones of the hand,
Its large ones, stones of . . . reeds,
The keel of the boat of Enki,
In battle, like the attacking storm, overwhelm;
Against the king, the water at the head of the boat,
Like a wolf devours,
Against Enki, the water at the rear of the boat,
Like a lion strikes down.
After on the mountain of heaven and earth,
An had caused the Anunnaki (his followers) to be born. . . .
The lord, that which is appropriate verily he caused to appear,
The lord whose decisions are unalterable,
Enlil, who brings up the seed of the land from the earth,
Took care to move away heaven from earth,
Took care to move away earth from heaven.

The Structure of Origin

(Kramer: 1961)(Frankfort: 1954)(Dalley: 2009) and (Speseir: 1969).

Tablet X

O Utu, shepherd of the land, father of the black-headed people,
When thou liest down, the people, too, lie down,
O hero Utu, when thou risest, the people, too, rise.
As light broke forth, as the horizon grew bright. . . .
As Utu came forth from his ganunu,
Utu has gone forth with lifted head to the bosom of his mother Ningal;
Behold the "bond of heaven and earth," the city, . . .
Behold Nippur, the city, . . .
Behold the "kindly wall," the city, . . .

Behold the Idsalla, its pure river,
Behold the Karkurunna, its quay,
Behold the Karasarra, its quay where the boats stand,
Behold the Pulal, its well of good water,
Behold the Idnunbirdu, its pure canal,
Behold Enlil, its young man,
Behold Ninlil, its young maid,
Behold Nunbarshegunu, its old woman.
In those days the mother, her begetter, gave advice to the maid,
Nunbarshegunu gave advice to Ninlil:
"At the pure river, O maid, at the pure river wash thyself,
O Ninlil, walk along the bank of the Idnunbirdu,
The bright-eyed, the lord, the bright-eyed,
The 'great mountain,' father Enlil, the bright-eyed, will see thee,
The shepherd . . . who decrees the fates, the bright-eyed, will see thee,
He will . . . . he will kiss thee."

(Kramer: 1961)(Frankfort: 1954)(Dalley: 2009) and (Speseir: 1969).

Tablet XI — The Structure of Origin

Enlil . . . departed from the city,
Nunamnir (a name of Enlil) . . . departed from the city.
Enlil walked, Ninlil followed,
Nunamnir walked, the maid followed,
Enlil says to the man of the gate:
"O man of the gate, man of the lock,
O man of the bolt, man of the pure lock,
Thy queen Ninlil is coming;
If she asks thee about me,
Tell her not where I am."
Ninlil approached the man of the gate:
"O man of the gate, man of the lock,
O man of the bolt, man of the pure lock,
Enlil, thy king, where is he going?"
Enlil answers her for the man of the gate:
"Enlil, the king of all the lands, has commanded me":
Ninlil: "True, Enlil is thy king, but I am thy queen."
Enlil: "If now thou art my queen, let my hand touch thy . . ."
Ninlil: "The 'water' of thy king, the bright 'water' is in my heart,
The 'water' of Nanna, the bright 'water' is in my heart."
Enlil: "The 'water' of my king, let it go toward heaven, let it go toward earth,
Let my 'water,' like the 'water' of my king, go toward earth."
Enlil, as the man of the gate, lay down in the
He kissed her, be cohabited with her,
Having kissed her, having cohabited with her,
The "water" of . . . Meslamtaea he caused to flow over (her) heart.
Enlil walked, Ninlil followed,
Nunamnir walked, the maid followed,
Enlil says to the man of the river of the nether world, the man-devouring river:
"O man of the river of the nether world, the man-devouring river,
Thy queen Ninlil is coming;
If she asks thee about me,
Tell her not where I am."
Ninlil approached the man of the river of the nether world, the man-devouring river:
"O man of the river of the nether world, the man-devouring river,
Enlil, thy king, where is he going?"
Enlil answers her for the man of the river of the nether world, the man-devouring river:
"Enlil, the king of all the lands, has commanded me."
Ninlil: "True, Enlil is thy king, but I am thy queen."
Enlil: "If now thou art my queen, let my hand touch thy . . ."
Ninlil: "The 'water' of thy king, the bright 'water' is in my heart,

The 'water' of Nanna, the bright 'water' is in my heart."
Enlil: "The 'water' of my king, let it go toward heaven, let it go toward earth,
Let my 'water,' like the 'water' of my king, go toward earth."
Enlil, as the man of the river of the nether world, the man-devouring river, lay down in the . . . .
He kissed her, he cohabited with her,
Having kissed her, having cohabited with her,
The "water" of Ninazu, the king of . . ., he caused to flow over (her) heart.
To go to his city, to stand before his father,
Ashgirbabbar set his mind.
"I, the hero, to my city I would go, before my father I would stand;
I, Sin, to my city I would go, before my father I would stand,
Before my father Enlil I would stand;
I, to my city I would go, before my mother Ninlil I would stand,
Before my father I would stand."
At the lapis lazuli quay, the quay of Enlil,
Nanna-Sin drew up his boat,
At the white quay, the quay of Enlil,
Ashgirbabbar drew up his boat,
On the . . . of the father, his begetter, he stationed himself,
To the gatekeeper of Enlil he says:
"Open the house, gatekeeper, open the house,
Open the house, O protecting genie, open the house,
Open the house, thou who makest the trees come forth, open the house,
O . . ., who makest the trees come forth, open the house,
Gatekeeper, open the house, O protecting genie, open the house."
Joyfully, the gatekeeper joyfully opened the door;
The protecting genie who makes the trees come forth, joyfully,
The gatekeeper joyfully opened the door;
He who makes the trees come forth, joyfully,
The gatekeeper joyfully opened the door;
With Sin, Enlil rejoiced.
"In the river give me overflow,
In the field give me much grain,
In the swampland give me grass and reeds,
In the forests give me . . .
In the plain give me . . .
In the palm-grove and vineyard give me honey and wine,
In the palace give me long life,
To Ur I shall go."
He gave him, Enlil gave him,
To Ur he went.
In the river he gave him overflow,
In the field he gave him much grain,
In the swampland he gave him grass and reeds,
In the forests he gave him . . .,
In the plain he gave him . . . .
In the palm-grove and vineyard he gave him honey and wine,
In the palace he gave him long life.
Enten caused the ewe to give birth to the lamb, the goat to give birth to the kid,
Cow and calf he caused to multiply, much fat and milk he caused to be produced,
In the plain, the heart of the wild goat, the sheep, and the donkey he made to rejoice,
The birds of the heaven, in the wide earth he had them set up their nests
The fish of the sea, in the swampland he had them lay their eggs,
In the palm-grove and vineyard he made to abound honey and wine,
The trees, wherever planted, he caused to bear fruit,
The furrows . . .,
Grain and crops he caused to multiply,
Like Ashnan (the grain goddess), the kindly maid, he caused strength to appear.
Emesh brought into existence the trees and the fields, he made wide the stables and

The Structure of Evaluation

sheepfolds,
In the farms he multiplied the produce,
The . . . he caused to cover the earth,
The abundant harvest he caused to be brought into the houses, he caused the granaries to be heaped high.
(Kramer: 1961)(Frankfort: 1954)(Dalley: 2009) and (Speseir: 1969).

Tablet XII

"O father Enlil, knowledge thou hast given me, I brought the water of abundance,
Farm I made touch farm, I heaped high the granaries,
Like Ashnan, the kindly maid, I caused strength to appear;
Now Emesh, the . . . . the irreverent, who knows not the heart of the fields,
On my first strength, on my first power, is encroaching;
At the palace of the king . . ."
Enlil answers Emesh and Enten:
"The life-producing water of all the lands, Enten is its 'knower,'
As farmer of the gods he has produced everything.
Emesh, my son, how dost thou compare thyself with Eaten, thy brother?"
The exalted word of Enlil whose meaning is profound,
The decision taken, is unalterable, who dares transgress it!
Emesh bent the knees before Enten,
Into his house he brought . . ., the wine of the grape and the date,
Emesh presents Enten with gold, silver, and lapis lazuli,
In brotherhood and friendship, happily, they pour out libations,
Together to act wisely and well they determined.
In the struggle between Emesh and Enten,
Enten, the steadfast farmer of the gods, having proved greater than Emesh,
. . . O father Enlil, praise!
The lord, that which is appropriate verily he caused to appear,
The lord whose decisions are unalterable,
Enlil, who brings up the seed of the land from the earth,
Took care to move away heaven from earth,
Took care to move away earth from heaven.
In order to make grow the creature which came forth,
In the "bond of heaven and earth" (Nippur) he stretched out the . . .
He brought the pickax into existence, the "day" came forth,
He introduced labor, decreed the fate,
Upon the pickax and basket he directs the "power."
Enlil made his pickax exalted,
His pickax of gold, whose head is of lapis lazuli,
The pickax of his house, of . . . silver and gold,
His pickax whose . . . is of lapis lazuli,
Whose tooth is a one-horned ox ascending a large wall.
The lord called up the pickax, decrees its fate,
He set the kindu, the holy crown, upon his head,
The head of man he placed in the mould,
Before Enlil he (man?) covers his land,
Upon his black-headed people he looked steadfastly.
The Anunnaki who stood about him,
He placed it (the pickax?) as a gift in their hands,
They soothe Enlil with prayer,
They give the pickax to the black-headed people to hold.
The pickax and the basket build cities,
The steadfast house the pickax builds, the steadfast house the pickax establishes,
The steadfast house it causes to prosper.
The house which rebels against the king,
The house which is not submissive to its king,
The pickax makes it submissive to the king.
of the bad . . . plants it crushes the head,
Plucks at the roots, tears at the crown,

The Structure of Evaluation

The pickax spares the . . . plants;
The pickax, its fate decreed by father Enlil,
The pickax is exalted.
In those days Enki says to Enlil:
"Father Enlil, Lahar and Ashnan,
They who have been created in the Dulkug,
Let us cause them to descend from the Dulkug."
At the pure word of Enki and Enlil,
Lahar and Ashnan descended from the Dulkug.
For Lahar they (Enlil and Enki) set up the sheepfold,
Plants, herbs, and . . . they present to him;
For Ashnan they establish a house,
Plow and yoke they present to her.
Lahar standing in his sheepfold,
A shepherd increasing the bounty of the sheepfold is he;
Ashnan standing among the crops,
A maid kindly and bountiful is she.
Abundance of heaven . . . ,
Lahar and Ashnan caused to appear,
In the assembly they brought abundance,
In the land they brought the breath of life,
The decrees of the god they direct,
The contents of the warehouses they multiply,
The storehouses they fill full.
In the house of the poor, hugging the dust,
Entering they bring abundance;
The pair of them, wherever they stand,
Bring heavy increase into the house;
The place where they stand they sate, the place where they sit they supply,
They made good the heart of An and Enlil.
The land Dilmun is a pure place, the land Dilmun is a clean place,
The land Dilmun is a clean place, the land Dilmun is a bright place;
He who is all alone laid himself down in Dilmun,
The place, after Enki had laid himself by his wife,
That place is clean, that place is bright;
He who is all alone laid himself down in Dilmun,
The place, after Enki had laid himself by Ninsikil,
That place is clean, that place is bright.
In Dilmun the raven uttered no cries,
The kite uttered not the cry of the kite,
The lion killed not,
The wolf snatched not the lamb,
Unknown was the kid-killing dog,
Unknown was the grain-devouring boar,
The bird on high . . . not its young,
The dove . . . not the head,
The sick-eyed says not "I am sick-eyed,"
The sick-headed says not "I am sick-headed,"
Its (Dilmun's) old woman says not "I am an old woman,"
Its old man says not "I am an old man,"
Its unwashed maid is not . . . in the city,
He who crosses the river utters no . . . ,
The overseer does not . . . ,
The singer utters no wail,
By the side of the city he utters no lament.
Her city drinks the water of abundance,
Dilmun drinks the water of abundance,
Her wells of bitter water, behold they are become wells of good water,
Her fields and farms produced crops and grain,

Her city, behold it is become the house of the banks and quays of the land,
Dilmun, behold it is become the house of the banks and quays of the land.
Upon Ninhursag he caused to flow the "water of the heart,"
She received the "water of the heart," the water of Enki.
One day being her one month,
Two days being her two months,
Three days being her three months,
Four days being her four months,
Five days (being her five months,)
Six days (being her six months,)
Seven days (being her seven months,)
Eight days (being her eight months,)
Nine days being her nine months, the months of "womanhood,"
Like . . . fat, like . . . fat, like good butter,
Nintu, the mother of the land, like . . . fat, (like . . . fat, like good butter,)
Gave birth to Ninsar.
(Kramer: 1961)(Frankfort: 1954)(Dalley: 2009) and (Speseir: 1969).

Tablet XIII

Enki, in the swampland, in the swampland, lies stretched out,
He says to his messenger Isimud:
"What is this (plant), what is this (plant)?"
His messenger, Isimud, answers him;
"My king, this is the 'tree-plant'," he says to him.
He cuts it off for him and he (Enki) eats it.
Enki: "What is this, what is this?"
Isimud: "My king, this is the 'honey-plant'."
He tears it off for him and he eats it.
"Until thou art dead, I shall not look upon thee with the 'eye of life'."
"If I bring Ninhursag before thee, what shall be my reward?"
Ninhursag: "My brother, what hurts thee?"

The Structure of Evaluation

Enki: "My . . . hurts me."
Ninhursag: "To the god Abu I gave birth for thee."
Ninhursag: "My brother, what hurts thee?"
Enki: "My hip hurts me."
Ninhursag: "To the god Nintul I gave birth for thee."
Ninhursag: "My brother, what hurts thee?"
Enki: "My tooth hurts me."
Ninhursag: "To the goddess Ninsutu I gave birth for thee."
Ninhursag: "My brother, what hurts thee?"
Enki: "My mouth hurts me."
Ninhursag: "To the goddess Ninkasi I gave birth for thee."
Ninhursag: "My brother, what hurts thee?"
Enki: "My . . . hurts me."
Ninhursag: "To the god Nazi I gave birth for thee."
Ninhursag: "My brother, what hurts thee?"
Enki: "My side hurts me."
Ninhursag: "To the goddess Dazimua I gave birth for thee."
Ninhursag: "My brother, what hurts thee?"
Enki: "My rib hurts me."
Ninhursag: "To the goddess Ninti I gave birth for thee."
Ninhursag: "My brother, what hurts thee?"
Enki: "My . . . hurts me."
Ninhursag: "To the god Enshagag I gave birth for thee."
Ninhursag: "For the little ones to which I gave birth
Enki: "Let Abu be the king of the plants,
Let Nintul be the lord of Magan,
Let Ninsutu marry Ninazu,
Let Ninkasi be (the goddess who) sates the heart,

Let Nazi marry Nindar,
Let Dazimua marry Ningishzida,
Let Ninti be the queen of the month,
Let Enshagag be the lord of Dilmun."
O Father Enki, praise!
O Sumer, great land, of the lands of the universe,
Filled with steadfast brightness, the people from sunrise to sunset obedient to the divine decrees,
Thy decrees are exalted decrees, unreachable,
Thy heart is profound, unfathomable,
Thy . . . is like heaven, untouchable.
"The king, begotten, adorns himself with lasting jewel,
The lord, begotten, sets crown on head,
Thy lord is an honored lord; with An, the king, he sits in the shrine of heaven,
Thy king is the great mountain, the father Enlil,
Like . . . the father of all the lands.
"The Anunnaki, the great gods,
In thy midst have taken up their dwelling place,
In thy large groves they consume (their) food.
"O house of Sumer, may thy stables be many, may thy cows multiply,
May thy sheepfolds be many, may thy sheep be myriad,
May thy . . . stand,
May thy steadfast . . . lift hand to heaven,
May the Anunnaki decree the fates in thy midst."
To Ur he came,
Enki, king of the abyss, decrees the fate:
"O city, well-supplied, washed by much water, firm standing ox,
Shrine of abundance of the land, knees opened, green like the 'mountain,'
Hashur-forest, wide shade. . . . heroic, Thy perfected decrees he has directed,
The great mountain, Enlil, in the universe has uttered thy exalted name;
O thou city whose fates have been decreed by Enki,
O thou shrine Ur, neck to heaven mayest thou rise."
Enki then comes to Meluhha, the "black mountain," .
(Kramer: 1961)(Frankfort: 1954)(Dalley: 2009) and (Speseir: 1969).

Tablet XIV

The plow and the yoke he directed,
The great prince Enki caused the . . . ox to . . .
To the pure crops he roared,
In the steadfast field he made grain grow;
The lord, the jewel and ornament of the plain,
The . . . farmer of Enlil,
Enkimdu, him of the canals and ditches,
Enki placed in their charge.
The lord called to the steadfast field, he caused it to produce much grain,
Enki made it bring forth its small and large beans . . . ,
The . . . grains he heaped up for the granary,
Enki added granary to granary,
With Enlil he increases abundance in the land;
Her whose head is . . . . whose face is . . . ,
The lady who . . . . the might of the land, the steadfast support of the black-headed people,
Ashnan, strength of all things,
Enki placed in charge.
After the water of creation had been decreed,
After the name hegal (abundance), born in heaven,
Like plant and herb had clothed the land,
The lord of the abyss, the king Enki,
Enki, the lord who decrees the fates,
Built his house of silver and lapis lazuli;

Its silver and lapis lazuli, like sparkling light,
The father fashioned fittingly in the abyss.
The (creatures of) bright countenance and wise, coming forth from the abyss,
Stood all about the lord Nudimmud;
The pure house be built, he adorned it with lapis lazuli,
He ornamented it greatly with gold,
In Eridu he built the house of the water-bank,
Its brickwork, word-uttering, advice-giving,
Its . . . like an ox roaring,
The house of Enki, the oracles uttering.
When Enki rises, the fish . . . rise,
The abyss stands in wonder,
In the sea joy enters,
Fear comes over the deep,
Terror holds the exalted river,
The Euphrates, the South Wind lifts it in waves.
Enki in the shrine Nippur,
Gives his father Enlil bread to eat,
In the first place he seated An (the heaven-god),
Next to An he seated Enlil,
Nintu he seated at the "big side,"
The Anunnaki seated themselves one after the other.
Enlil says to the Anunnaki:
"Ye great gods who are standing about,
My son has built a house, the king Enki;
Eridu, like a mountain, he has raised up from the earth,
In a good place he has built it.
Eridu, the clean place, where none may enter,
The house built of silver, adorned with lapis lazuli,
The house directed by the seven "lyre-songs," given over to incantation,
With pure songs . . . ,
The abyss, the shrine of the goodness of Enki, befitting the divine decrees,
Eridu, the pure house having been built,
O Enki, praise!"

The Structure of Organization

(Kramer: 1961)(Frankfort: 1954)(Dalley: 2009) and (Speseir: 1969).

Tablet XV and Tablet XVI

"O name of my power, O name of my power,
To the bright Inanna, my daughter, I shall present . . .
The arts of woodworking, metalworking, writing, toolmaking, leatherworking. . . . building, basketweaving."
Pure Inanna took them.
"Come, my messenger, Isimud, give ear to my instructions,
A word I will say to thee, take my word.
The maid, all alone, has directed her step to the Abzu,
Inanna, all alone, has directed her step to the Abzu,
Have the maid enter the Abzu of Eridu,
Have Inanna enter the Abzu of Eridu,
Give her to eat barley cake with butter,
Pour for her cold water that freshens the heart,
Give her to drink date-wine in the 'face of the lion,'
. . . for her . . . . make for her . . .,
At the pure table, the table of heaven,
Speak to Inanna words of greeting."
"O name of My power, O name of my power,
To the pure Inanna, my daughter, I shall present . . ..
Lordship, . . .-ship, godship, the tiara exalted and enduring, the throne of kingship."

The Structure of Organization

Pure Inanna took them.
"O name of my power, O name of my power,
To the pure Inanna, my daughter, I shall present . . . .
The exalted scepter, staffs, the exalted shrine, shepherd ship , kingship."
Pure Inanna took them.
The prince calls his messenger Isimud,
Enki gives the word to the "good name of heaven":
"Oh my messenger Isimud, 'my good name of heaven'."
"Oh my king Enki, here I stand, forever is praise."
"The 'boat of heaven,' where now has it arrived?"
"At the quay Idal it has arrived."
"Go, and let the sea monsters seize it from her."
"Oh my queen, thy father has sent me to thee,
Oh Inanna, thy father has sent me to thee,
Thy father, exalted is his speech,
Enki, exalted is his utterance,
His great words are not to go unheeded."
Holy Inanna answers him:
"My father, what has he spoken to thee, what has he said to thee?
His great words that are not to go unheeded, what pray are they?"
"My king has spoken to me,
Enki has said to me:
'Let Inanna go to Erech,
But thou, bring me back the "boat of heaven" to Eridu'."
Holy Inanna says to the messenger Isimud:
"My father, why pray has he changed his word to me,
Why has he broken his righteous word to me,
Why has he defiled his great words to me?
My father has spoken to me falsehood, has spoken to me falsehood,
Falsely has he uttered the name of his power, the name of the Abzu."
Barely had she uttered these words,
The sea monsters seized the "boat of heaven."
Inanna says to her messenger Ninshubur:
"Come, my true messenger of Eanna,
My messenger of favorable words,
My carrier of true words,
Whose hand never falters, whose foot never falters,
Save the 'boat of heaven,' and Inanna's presented decrees."
"O my son, rise from thy bed, from thy . . . work what is wise,
Fashion servants of the gods, may they produce their . . ,"
O my mother, the creature whose name thou hoist uttered, it exists,
Bind upon it the . . . of the gods;
Mix the heart of the clay that is over the abyss,
The good and princely fashioners will thicken the clay,
Thou, do thou bring the limbs into existence;
Ninmah (the earth-mother goddess) will work above thee,
. . . (goddesses of birth) will stand by thee at thy fashioning;
O my mother, decree thou its (the new-born's) fate,
Ninmah will bind upon it the . . . of the gods,
. . . as man . . .
(Kramer: 1961)(Frankfort: 1954)(Dalley: 2009) and (Speseir: 1969).

Tablet XVII

The . . . she (Ninmah) made into a woman who cannot give birth.
Enki upon seeing the woman who cannot give birth,
Decreed her fate, destined her to be stationed in the "woman house."
The . . . she (Ninmah) made into one who has no male organ, who has no female organ.
Enki, upon seeing him who has no male organ, who has no female organ,
To stand before the king, decreed as his fate.

"of him whom they hand has fashioned, I have decreed the fate,
Have given him bread to eat;
Do thou decree the fate of him whom my hand has fashioned,
Do thou give him bread to eat."
After on the mountain of heaven and earth,
An (the heaven-god) had caused the Anunnaki (his followers) to be born
Because the name Ashnan (the grain-goddess) had not been born, had not been fashioned,
Because Uttu (the goddess of plants) had not been fashioned,
Because to Uttu no temenos had been set up,
There was no ewe, no lamb was dropped,
There was no goat, no kid was dropped,
The ewe did not give birth to its two lambs,
The goat did not give birth to its three kids.
Because the name of Ashnan, the wise, and Lahar (the cattle-god),
The Anunnaki, the great gods, did not know,
The . . . grain of thirty days did not exist,
The . . . grain of forty days did not exist,
The small grains, the grain of the mountain, the grain of the pure living creatures did not exist.
Because Uttu had not been born, because the crown (of vegetation?) had not been raised,
Because the lord . . . had not been born,
Because Sumugan, the god of the plain, had not come forth,
Like mankind when first created,
They (the Anunnaki knew not the eating of bread,
Knew not the dressing of garments,
Ate plants with their mouth like sheep,
Drank water from the ditch.
In those days, in the creation chamber of the gods,
In their house Dulkug, Lahar and Ashnan were fashioned;
The produce of Lahar and Ashnan,
The Anunnaki of the Dulkug eat, but remain unsated;
In their pure sheepfolds milk, . . ., and good things,
The Anunnaki of the Dulkug drink, but remain unsated;
For the sake of the good things in their pure sheepfolds,
Man was given breath.

(Kramer: 1961)(Frankfort: 1954)(Dalley: 2009) and (Speseir: 1969).

4.3.2. The Babylonian - Assyrian Myth

The Structure of Organization

The Babylonian legend - the outset of the second millennium B.C. - talks about the creation of the world beginning from the first primordial - aquatic - and we can depend on several texts, that were found in the library of King Ashur Panipal in Nineveh, which date back to the seventh century B. C.. For the complete text of the Babylonian Legend of Genesis and its references, (Heidel: 1970)(Frankfort: 1954) (Dalley: 2009) and (Oppenheim: 1969).

In the Babylonian legend, we read:

Babylonian Genesis: The major source for the Babylonian conception of the creation of the universe is a Babylonian myth entitled Enuma Elish.

Once upon a time there was a Tiamat bear with the noise, but her spouse Apsu was aggravated and together with his vizier Mummu plotted to kill the gods. The gods hear about it, and one of them, Ea also called Nudimmud, kills Apsu and ties up Mummu. Marduk, Ea's and Damkina's son, is created within Apsu's corpse. Marduk is given power over the winds, by which he makes a flood-wave that stirs up Tiamat. Some of the gods complain to Tiamat. They insist that she should do battle with the gods guilty of Apsu's death and the continued unrest.

The division of gods into those loyal or not to Tiamat may have been that of Anunna and Igigi, the two groups that the Babylonian gods were normally divided into, Anunna connected to the underworld, and the Igigi to the sky.

Tiamat is convinced by the complaining gods, and prepares for battle against "the gods inside him (Apsu). Snakes with bodies filled of venom are created, and terrible dragons. The monsters are created by 'Mother Hubur', another name for Tiamat. All in all, she creates eleven kinds of monsters, of which nine are named: a horned serpent, a mushussu-dragon, a lahmu-hero, an ugallu-demon, a rabid dog, a scorpion man, aggressive umu-demons, a fish-man, and a bull-man.

Tiamat also promotes her lover Qingu to head her army, and gives him the Tablet of Destinies. Qingu (previously spelled Kingu) is little known outside Enuma Elish.

Ea learns about this, and reports it to his grandfather Anshar, who blames him for it and demands of him to soothe Tiamat's uprising. When Ea fails, his son Marduk volunteers to battle Tiamat and her monsters, but demands in return to be given supreme power over the gods.

The gods agree, and they found a princely shrine for him. He is given several powers such as that of having constellations disappear and reappear. Marduk makes himself a mighty bow and arrow, a mace, and a net to encircle Tiamat. A net is an odd tool by which to capture a water creature. He would do better with his winds only. Marduk encircles Tiamat with the net, and forces open her mouth with his wind. He resists her spells, imprisons her with seven winds, and then uses his bow.

He fixes the monsters with nose-ropes and ties their arms. He defeats Qingu and takes the Table of Destinies, seals it with his own seal and presses it to his breast. Out of Tiamat's corpse, he creates the world.

He arranges the constellations in the sky, designates the year and the months, appointing three stars for each of the twelve months, and sets the moon's phases. From parts of Tiamat he creates rivers and landscape. He makes "a house to be a luxurious dwelling for myself," a cult center that will also serve as a resting place for the gods.

Then he decides to create man, to serve the gods with offerings, so that they can be at leisure. The word used for man is lullu, meaning a first, primitive man. his blood is used to create mankind, Ea is specified as the creator of man. Finally, the gods praise Marduk, and give him fifty names that represent different aspects of his powers and sovereignty. The text ends with instructions on how it should be passed on from generation to generation, and the command to worship Marduk, king of the gods.

Enuma Elish: The Beginning of the Text:

Tablet I

When in the height heaven was not named,
And the earth beneath did not yet bear a name,
And the primeval Apsu, who begat them,
And chaos, Tiamut, the mother of them both
Their waters were mingled together,
And no field was formed, no marsh was to be seen;
When of the gods none had been called into being,
And none bore a name, and no destinies were ordained;
Then were created the gods in the midst of heaven,
Lahmu and Lahamu were called into being...
Ages increased,...
Then Ansar and Kisar were created, and over them....
Long were the days, then there came forth.....
Anu, their son,...
Ansar and Anu...
And the god Anu...
Nudimmud, whom his fathers, his begetters.....
Abounding in all wisdom,...'
He was exceeding strong...
He had no rival -
Thus were established and were... the great gods.
But Tiamat and Apsu were still in confusion...
They were troubled and...
In disorder...
Apru was not diminished in might...
And Tiamat roared...
She smote, and their deeds...
Their way was evil...
Then Apsu, the begetter of the great gods,
Cried unto Mummu, his minister, and said unto him:
"O Mummu, thou minister that rejoices my spirit,
Come, unto Tiamut let us go!
So they went and before Tiamat they lay down,
They consulted on a plan with regard to the gods, their sons.
Apsu opened his mouth and spake,
And unto Tiamut, the glistening one, he addressed the word:
...their way...
By day I cannot rest, by night I cannot lie down in peace.
But I will destroy their way, I will...
Let there be lamentation, and let us lie down again in peace."
When Tiamat heard these words,
She raged and cried aloud...
She... grievously...,
She uttered a curse, and unto Apsu she spake:
"What then shall we do?
Let their way be made difficult, and let us lie down again in peace."
Mummu answered, and gave counsel unto Apsu,
...and hostile to the gods was the counsel Mummu gave:
Come, their way is strong, but thou shalt destroy it;
Then by day shalt thou have rest, by night shalt thou lie down in peace."
Apsu harkened unto him and his countenance grew bright,
Since he (Mummu) planned evil against the gods his sons.
... he was afraid...,
His knees became weak; they gave way beneath him,
Because of the evil which their first-born had planned.
... their... they altered.
... they...,

The Structure of Origin

Lamentation they sat in sorrow.....
Then Ea, who knoweth all that is, went up and he beheld their muttering.
... he spake:
... thy... he hath conquered and
... he weepeth and sitteth in tribulation.
... of fear,
... we shall not lie down in peace.
... Apsu is laid waste,
... and Mummu, who were taken captive, in...
... thou didst...
... let us lie down in peace.
... they will smite....
... let us lie down in peace.
... thou shalt take vengeance for them,
... unto the tempest shalt thou...!"
And Tiamat harkened unto the word of the bright god, and said:
... shalt thou entrust! let us wage war!"
... the gods in the midst of...
... for the gods did she create.
They banded themselves together and at the side of Tiamat they advanced;
They were furious; they devised mischief without resting night and day.
They prepared for battle, fuming and raging;
They joined their forces and made war,
Ummu-Hubur [Tiamat] who formed all things,
Made in addition weapons invincible; she spawned monster-serpents,
Sharp of tooth, and merciless of fang;
With poison, instead of blood, she filled their bodies.
Fierce monster-vipers she clothed with terror,
With splendor she decked them, she made them of lofty stature.
Whoever beheld them, terror overcame him,
Their bodies reared up and none could withstand their attack.
She set up vipers and dragons, and the monster Lahamu,
And hurricanes, and raging hounds, and scorpion-men,
And mighty tempests, and fish-men, and rams;
They bore cruel weapons, without fear of the fight.
Her commands were mighty, none could resist them;
After this fashion, huge of stature, she made eleven [kinds of] monsters.
Among the gods who were her sons, inasmuch as he had given her support,
She exalted Kingu; in their midst she raised him to power.
To march before the forces, to lead the host,
To give the battle-signal, to advance to the attack,
To direct the battle, to control the fight,
Unto him she entrusted; in costly raiment she made him sit, saying:
I have uttered thy spell, in the assembly of the gods I have raised thee to power.
The dominion over all the gods have I entrusted unto him.
Be thou exalted, thou my chosen spouse,
May they magnify thy name over all of them the Anunnaki."
She gave him the Tablets of Destiny, on his breast she laid them, saying:
Thy command shall not be without avail, and the word of thy mouth shall be established."
Now Kingu, thus exalted, having received the power of Anu,
Decreed the fate among the gods his sons, saying:
"Let the opening of your mouth quench the Fire-god;
Whoso is exalted in the battle, let him display his might!"
(Heidel: 1970)(Frankfort: 1954) (Dalley: 2009) and (Oppenheim: 1969).

Tablet II

Tiamat made weighty her handiwork,
Evil she wrought against the gods her children.
To avenge Apsu, Tiamat planned evil,
But how she had collected her forces, the god unto Ea divulged.
Ea harkened to this thing,
He was grievously afflicted and he sat in sorrow.
The days went by, and his anger was appeased,
And to the place of Ansar his father he took his way.
He went and, standing before Ansar, the father who begat him,
All that Tiamat had plotted he repeated unto him,
Saying, "Tiamat our mother hath conceived a hatred for us,
With all her force she rage, full of wrath.
All the gods have turned to her,
With those, whom ye created, the vigor at her side.
They are banded together and at the side of Tiamat they advance;
They are furious, they devise mischief without resting night and day.
They prepare for battle, fuming and raging;
They have joined their forces and are making war.
Ummu-Hubur, who formed all things,
Hath made in addition weapons invincible; she hath spawned monster-serpents,
Sharp of tooth, and merciless of fang.
With poison, instead of blood, she hath filled their bodies.
Fierce monster-vipers she hath clothed with terror,
With splendor she hath decked them; she hath made them of lofty stature.
Whoever behold them is overcome by terror,
Their bodies rear up and none can withstand their attack.
She hath set up vipers, and dragons, and the monster Lahamu,
And hurricanes and raging hounds, and scorpion-men,
And mighty tempests, and fish-men and rams;
They bear cruel weapons, without fear of the fight.
Her commands are mighty; none can resist them;
After this fashion, huge of stature, hath she made eleven monsters.
Among the gods who are her sons, inasmuch as he hath given her support,
She hath exalted Kingu; in their midst she hath raised him to power.
To march before the forces, to lead the host,
To give the battle-signal, to advance to the attack.
To direct the battle, to control the fight,
Unto him hath she entrusted; in costly raiment she hath made him sit, saving:.
I have uttered thy spell; in the assembly of the gods I have raised thee to power,
The dominion over all the gods have I entrusted unto thee.
Be thou exalted, thou my chosen spouse,
May they magnify thy name over all of them
She hath given him the Tablets of Destiny, on his breast she laid them, saying:
'Thy command shall not be without avail, and the word of thy mouth shall be established.'
Now Kingu, thus exalted, having received the power of Anu,
Decreed the fate for the gods, her sons, saying:
'Let the opening of your mouth quench the Fire-god;
Whoso is exalted in the battle, let him display his might!'"
When Ansar heard how Tiamat was mightily in revolt,
he bit his lips, his mind was not at peace,
..., he made a bitter lamentation:
... battle,
... thou...
Mummu and Apsu thou hast smitten
But Tiamat hath exalted Kingu, and where is one who can oppose her?
... deliberation
... the ... of the gods, -Nudimmud.
Ansar unto his son addressed the word:
"... my mighty hero,

The Structure of Origin

Whose strength is great and whose onslaught cannot be withstood,
Go and stand before Tiamat,
That her spirit may be appeased, that her heart may be merciful.
But if she will not harken unto thy word,
Our word shalt thou speak unto her, that she may be pacified."
He heard the word of his father Ansar
And he directed his path to her, toward her he took the way.
Ann drew nigh, he beheld the muttering of Tiamat,
But he could not withstand her, and he turned back.
... Ansar
... he spake unto him:
an avenger...
... valiant
... in the place of his decision
... he spake unto him:
... thy father
" Thou art my son, who make merciful his heart.
... to the battle shalt thou draw nigh,
he that shall behold thee shall have peace."
And the lord rejoiced at the word of his father,
And he drew nigh and stood before Ansar.
Ansar beheld him and his heart was filled with joy,
He kissed him on the lips and his fear departed from him.
"O my father, let not the word of thy lips be overcome,
Let me go, that I may accomplish all that is in thy heart.
O Ansar, let not the word of thy lips be overcome,
Let me go, that I may accomplish all that is in thy heart."
What man is it, who hath brought thee forth to battle?
... Tiamat, who is a woman, is armed and attacked thee.
... rejoice and be glad;
The neck of Tiamat shalt thou swiftly trample under foot.
... rejoice and be glad;
The neck of Tiamat shalt thou swiftly trample under foot.
O my son, who knoweth all wisdom,
Pacify Tiamat with thy pure incantation.
Speedily set out upon thy way,
For thy blood shall not be poured out; thou shalt return again."
The lord rejoiced at the word of his father,
His heart exulted, and unto his father he spake:
"O Lord of the gods, Destiny of the great gods,
If I, your avenger,
Conquer Tiamat and give you life,
Appoint an assembly, make my fate preeminent and proclaim it.
In Upsukkinaku seat yourself joyfully together,
With my word in place of you will I decree fate.
May whatsoever I do remain unaltered,
May the word of my lips never be chanced nor made of no avail."
(Heidel: 1970)(Frankfort: 1954) (Dalley: 2009) and (Oppenheim: 1969).

Tablet III

Ansar opened his mouth, and
Unto Gaga, his minister, spake the word.
"O Gaga, thou minister that rejoicest my spirit,
Unto Lahmu and Lahamu will I send thee.
... thou canst attain,
... thou shalt cause to be brought before thee.
... let the gods, all of them,
Make ready for a feast, at a banquet let them sit,
Let them eat bread, let them mix wine,
That for Marduk, their avenger they may decree the fate.
Go, Gaga, stand before them,
And all that I tell thee, repeat unto them, and say:
'Ansar, your son, hath sent me,
The purpose of his heart he hath made known unto me.
The purpose of his heart he hath made known unto me.
He saith that Tiamat our mother hath conceived a hatred for us,
With all her force she rage, full of wrath.
All the gods have turned to her,
With those, whom ye created, they go at her side.
They are banded together, and at the side of Tiamat they advance;
They are furious, they devise mischief without resting night and day.
They prepare for battle, fuming and raging;
They have joined their forces and are making war.
Ummu-Hubur, who formed all things,
Hath made in addition weapons invincible; she hath spawned monster-serpents,
Sharp of tooth and merciless of fang.
With poison, instead of blood, she hath filled their bodies.
Fierce monster-vipers she hath clothed with terror,
With splendor she hath decked them; she hath made them of lofty stature.
Whoever beboldeth them, terror over cometh him,
Their bodies rear up and none can withstand their attack.
She hath set up vipers, and dragons, and the monster Lahamu,
And hurricanes, and raging bounds, and scorpion-men,
And mighty tempests, and fish-men, and rams;
They bear merciless weapons, without fear of the fight.
Her commands are miahty; none can. resist them;
After this fashion, huge of stature, hath she made eleven monsters.
Among the gods who are her sons, inasmuch as he hath given her support,
She hath exalted Kingu; in their midst she hath raised him to power.
To march before the forces, to lead the host,
To give the battle-signal, to advance to the attack,
To direct the battle, to control the fight,
Unto him hath she entrusted; in costly raiment she hath made him sit, saying:
I have uttered thy spell; in the assembly of the gods
I have raised thee to power,
The dominion over all the gods have I entrusted unto thee.
Be thou exalted, thou my chosen spouse,
May they magnify thy name over all of them ... the Anunnaki."
She hath given him the Tablets of Destiny, on his breast she laid them, saying:
Thy command shall not be without avail, and the word of thy mouth shall be established."
Now Kingu, thus exalted, having received the power of Anu,
Decreed the fate for the gods, her sons, saving:
Let the opening of your mouth quench the Fire-god;
Whoso is exalted in the battle, let him display his might!"
I sent Anu, but he could not withstand her;
Nudimmud was afraid and turned back.
But Marduk hath set out, the director of the gods, your son;
To set out against Tiamat his heart hath prompted him.
He opened his mouth and spake unto me, saying: "If I, your avenger,

The Structure of Origin

Conquer Tiamat and give you life,
Appoint an assembly, make my fate preeminent and proclaim it.
In Upsukkinaku seat yourself joyfully together;
With my word in place of you will I decree fate.
May whatsoever I do remain unaltered,
May the word of my lips never be changed nor made of no avail."'
Hasten, therefore, and swiftly decree for him the fate which you bestow,
That he may go and fight your strong enemy.
Gaga went, he took his way and
Humbly before Lahmu and Lahamu, the gods, his fathers,
He made obeisance, and he kissed the ground at their feet.
He humbled himself; then he stood up and spake unto them saying:
"Ansar, your son, hath sent me,
The purpose of his heart he hath made known unto me.
He saith that Tiamat our mother hath conceived a hatred for us,
With all her force she rage, full of wrath.
All the gods have turned to her,
With those, whom ye created, they go at her side.
They are banded together and at the side of Tiamat they advance;
They are furious, they devise mischief without resting night and day.
They prepare for battle, fuming and raging;
They have joined their forces and are making war.
Ummu-Hubur, who formed all things,
Hath made in addition weapons invincible; she hath spawned monster-serpents,
Sharp of tooth and merciless of fang.
With poison, instead of blood, she hath filled their bodies.
Fierce monster-vipers she hath clothed with terror,
With splendor she hath decked them, she hath made them of lofty stature.
Whoever beboldeth them, terror over cometh him,
Their bodies rear up and none can withstand their attack.
She hath set up vipers, and dragons, and the monster Lahamu,
And hurricanes, and raging hounds, and scorpion-men,
And mighty tempests, and fish-men, and rams;
They bear merciless weapons, without fear of the fight.
Her commands are mighty; none can resist them;
After this fashion, huge of stature, hath she made eleven monsters.
Among the gods who are her sons, inasmuch as he hath given her support,
She hath exalted Kingu; in their midst she hath raised him to power.
To march before the forces, to lead the host,
To give the battle-signal, to advance to the attack, To direct the battle, to control the fight,
Unto him hath she entrusted; in costlv raiment she hath made him sit, saving:
I have uttered thy spell; in the assembly of the gods I have raised thee to power,
The dominion over all the gods have I entrusted unto thee.
Be thou exalted, thou my chosen spouse,
May they magnify thy name over all of them...the Anunnaki.
She hath given him the Tablets of Destiny on his breast she laid them, saving:
Thy command shall not be without avail, and the word of thy mouth shall be established.'
Now Kingu, thus exalted, having received the power of Anu,
Decreed the fate for the gods, her sons, saying:
'Let the opening of your mouth quench the Fire-god;
Whoso is exalted in the battle, let him display his might!'
I sent Anu, but he could not withstand her;
Nudimmud was afraid and turned back.
But Marduk hath set out, the director of the gods, your son;
To set out against Tiamat his heart hath prompted him.
He opened his mouth and spake unto me, saying:
'If I, your avenger,
Conquer Tiamat and give you life,
Appoint an assembly, make my fate preeminent and proclaim it.
In Upsukkinaku seat yourselves joyfully together;

With my word in place of you will I decree fate.
May, whatsoever I do remain unaltered,
May the word of my lips never be changed nor made of no avail.'
Hasten, therefore, and swiftly decree for him the fate which you bestow,
That he may go and fight your strong enemy!
Lahmu and Lahamu heard and cried aloud
All of the Igigi [The elder gods] wailed bitterly, saying:
What has been altered so that they should
We do not understand the deed of Tiamat!
Then did they collect and go,
The great gods, all of them, who decree fate.
They entered in before Ansar, they filled...
They kissed one another, in the assembly...;
They made ready for the feast, at the banquet they sat;
They ate bread, they mixed sesame-wine.
The sweet drink, the mead, confused their...
They were drunk with drinking, their bodies were filled.
They were wholly at ease, their spirit was exalted;
Then for Marduk, their avenger, did they decree the fate.
(Heidel: 1970)(Frankfort: 1954) (Dalley: 2009) and (Oppenheim: 1969).

Tablet IV

They prepared for him a lordly chamber,
Before his fathers as prince he took his place.
"Thou art chiefest among the great gods,
Thy fate is unequaled, thy word is Anu!
O Marduk, thou art chiefest among the great gods,
Thy fate is unequaled, thy word is Anu!
Henceforth not without avail shall be thy command,
In thy power shall it be to exalt and to abase.
Established shall be the word of thy mouth, irresistible shall be thy command,
None among the gods shall transgress thy boundary.
Abundance, the desire of the shrines of the gods,
Shall be established in thy sanctuary, even though they lack offerings.
O Marduk, thou art our avenger!
We give thee sovereignty over the whole world.
Sit thou down in might; be exalted in thy command.
Thy weapon shall never lose its power; it shall crush thy foe.
O Lord, spare the life of him that putteth his trust in thee,
But as for the god who began the rebellion, pour out his life."
Then set they in their midst a garment,
And unto Marduk,- their first-born they spake:
"May thy fate, O lord, be supreme among the gods,
To destroy and to create; speak thou the word, and thy command shall be fulfilled.
Command now and let the garment vanish;
And speak the word again and let the garment reappear!
Then he spake with his mouth, and the garment vanished;
Again he commanded it, and. the garment reappeared.
When the gods, his fathers, beheld the fulfillment of his word,
They rejoiced, and they did homage unto him, saying, " Marduk is king!"
They bestowed upon him the scepter, and the throne, and the ring,
They give him an invincible weapony which overwhelmeth the foe.
Go, and cut off the life of Tiamat,
And let the wind carry her blood into secret places."
After the gods his fathers had decreed for the lord his fate,
They caused him to set out on a path of prosperity and success.
He made ready the bow, he chose his weapon,
He slung a spear upon him and fastened it...
He raised the club, in his right hand he grasped it,
The bow and the quiver he hung at his side.

The Structure of Evaluation

He set the lightning in front of him,
With burning flame he filled his body.
He made a net to enclose the inward parts of Tiamat,
The four winds he stationed so that nothing of her might escape;
The South wind and the North wind and the East wind and the West wind
He brought near to the net, the gift of his father Anu.
He created the evil wind, and the tempest, and the hurricane,
And the fourfold wind, and the sevenfold wind, and the whirlwind, and the wind which had no equal;
He sent forth the winds which he had created, the seven of them;
To disturb the inward parts of Tiamat, they followed after him.
Then the lord raised the thunderbolt, his mighty weapon,
He mounted the chariot, the storm unequaled for terror,
He harnessed and yoked unto it four horses,
Destructive, ferocious, overwhelming, and swift of pace;
... were their teeth, they were flecked with foam;
They were skilled in... , they had been trained to trample underfoot.
... . mighty in battle,
Left and right....
His garment was... , he was clothed with terror,
With overpowering brightness his head was crowned.
Then he set out, he took his way,
And toward the raging Tiamat he set his face.
On his lips he held ...,
... he grasped in his hand.
Then they beheld him, the gods beheld him,
The gods his fathers beheld him, the gods beheld him.
And the lord drew nigh, he gazed upon the inward parts of Tiamat,
He perceived the muttering of Kingu, her spouse.
As Marduk gazed, Kingu was troubled in his gait,
His will was destroyed and his motions ceased.
And the gods, his helpers, who marched by his side,
Beheld their leader's..., and their sight was troubled.
But Tiamat... , she turned not her neck,
With lips that failed not she uttered rebellious words:
"... thy coming as lord of the gods,
From their places have they gathered, in thy place are they! "
Then the lord raised the thunderbolt, his mighty weapon,
And against Tiamat, who was raging, thus he sent the word:
Thou art become great, thou hast exalted thyself on high,
And thy heart hath prompted thee to call to battle.
... their fathers...,
... their... thou hatest...
Thou hast exalted Kingu to be thy spouse,
Thou hast... him, that, even as Anu, he should issue deerees.
thou hast followed after evil,
And against the gods my fathers thou hast contrived thy wicked plan.
Let then thy host be equipped, let thy weapons be girded on!
Stand! I and thou, let us join battle!
When Tiamat heard these words,
She was like one posessed, .she lost her reason.
Tiamat uttered wild, piercing cries,
She trembled and shook to her very foundations.
She recited an incantation, she pronounced her spell,
And the gods of the battle cried out for their weapons.
Then advanced Tiamat and Marduk, the counselor of the gods;
To the fight they came on, to the battle they drew nigh.
The lord spread out his net and caught her,
And the evil wind that was behind him he let loose in her face.
As Tiamat opened her mouth to its full extent,

He drove in the evil wind, while as yet she had not shut her lips.
The terrible winds filled her belly,
And her courage was taken from her, and her mouth she opened wide.
He seized the spear and burst her belly,
He severed her inward parts, he pierced her heart.
He overcame her and cut off her life;
He cast down her body and stood upon it.
When he had slain Tiamat, the leader,
Her might was broken, her host was scattered.
And the gods her helpers, who marched by her side,
Trembled, and were afraid, and turned back.
They took to flight to save their lives;
But they were surrounded, so that they could not escape.
He took them captive, he broke their weapons;
In the net they were caught and in the snare they sat down.
The ... of the world they filled with cries of grief.
They received punishment from him, they were held in bondage.
And on the eleven creatures which she had filled with the power of striking terror,
Upon the troop of devils, who marched at her...,
He brought affliction, their strength he...;
Them and their opposition he trampled under his feet.
Moreover, Kingu, who had been exalted over them,
He conquered, and with the god Dug-ga he counted him.
He took from him the Tablets of Destiny that were not rightly his,
He sealed them with a seal and in his own breast he laid them.
Now after the hero Marduk had conquered and cast down his enemies,
And had made the arrogant foe even like
And had fully established Ansar's triumph over the enemy
And had attained the purpose of Nudimmud,
Over the captive gods he strengthened his durance,
And unto Tiamat, whom he had conquered, he returned.
And the lord stood upon Tiamat's hinder parts,
And with his merciless club he smashed her skull.
He cut through the channels of her blood,
And he made the North wind bear it away into secret places.
His fathers beheld, and they rejoiced and were glad;
Presents and gifts they brought unto him.
Then the lord rested, gazing upon her dead body,
While he divided the flesh of the ... , and devised a cunning plan.
He split her up like a flat fish into two halves;
One half of her he stablished as a covering for heaven.
He fixed a bolt, he stationed a watchman,
And bade them not to let her waters come forth.
He passed through the heavens, he surveyed the regions thereof,
And over against the Deep he set the dwelling of Nudimmud.
And the lord measured the structure of the Deep,
And he founded E-sara, a mansion like unto it.
The mansion E-sara which he created as heaven,
He caused Anu, Bel, and Ea in their districts to inhabit.

(Heidel: 1970)(Frankfort: 1954) (Dalley: 2009) and (Oppenheim: 1969).

Tablet V

He (Marduk) made the stations for the great gods;
The stars, their images, as the stars of the Zodiac, he fixed.
He ordained the year and into sections he divided it;
For the twelve months he fixed three stars.
After he had ... the days of the year ... images,
He founded the station of Nibir [the planet Jupiter] to determine their bounds;
That none might err or go astray,
He set the station of Bel and Ea along with him.
He opened great gates on both sides,
He made strong the bolt on the left and on the right.
In the midst thereof he fixed the zenith;
The Moon-god he caused to shine forth, the night he entrusted to him.
He appointed him, a being of the night, to determine the days;
Every month without ceasing with the crown he covered him, saying:
"At the beginning of the month, when thou shinest upon the land,
Thou commandest the horns to determine six days,
And on the seventh day to divide the crown.
On the fourteenth day thou shalt stand opposite, the half....
When the Sun-god on the foundation of heaven...thee,
The ... thou shalt cause to ..., and thou shalt make his...
... unto the path of the Sun-god shalt thou cause to draw nigh,
And on the ... day thou shalt stand opposite, and the Sun-god shall...
... to traverse her way.
... thou shalt cause to draw nigh, and thou shalt judge the right.
... to destroy..."
The gods, his fathers, beheld the net which he had made,
They beheld the bow and how its work was accomplished.
They praised the work which he had done...
Then Anu raised the ... in the assembly of the gods. He kissed the bow, saving, " It is...!"
And thus he named the names of the bow, saving,
"'Long-wood' shall be one name, and the second name shall be ...,
And its third name shall be the Bow-star, in heaven shall it...!"
Then he fixed a station for it...
Now after the fate of...
He set a throne...
...in heaven...

The Structure of Evaluation

Tablet VI

When Marduk heard the word of the gods,
His heart prompted him and he devised a cunning plan.
He opened his mouth and unto Ea he spake
That which he had conceived in his heart he imparted unto him:
"My blood will I take and bone will I fashion
I will make man, that man may
I will create man who shall inhabit the earth,
That the service of the gods may be established, and that their shrines may be built.
But I will alter the ways of the gods, and I will change their paths;
Together shall they be oppressed and unto evil shall they....
And Ea answered him and spake the word:
"... the ... of the gods I have changed
... and one...
... shall be destroyed and men will I...
... and the gods .
... and they..."
They rejoiced...
In Upsukkinnaku they set their dwelling.
of the heroic son, their avenger, they cried:
" We, whom he succored.... !"

The Structure of Evaluation

They seated themselves and in the assembly they named him...,
They all cried aloud, they exalted him...
(Heidel: 1970)(Frankfort: 1954) (Dalley: 2009) and (Oppenheim: 1969).

Tablet VII

O Asari, [Marduk] "Bestower of planting," "Founder of sowing"
"Creator of grain and plants," "who caused the green herb to spring up!"
O Asaru-alim, [Mardk] "who is revered in the house of counsel," "who aboundeth in counsel,"
The gods paid homage, fear took hold upon them!
O Asaru-alim-nuna, [Marduk] "the mighty one," "the Light of the father who begat him,"
"Who directeth the decrees of Anu Bel, and Ea!"
He was their patron, he ordained their...;
He, whose provision is abundance, goeth forth...
Tutu [Marduk] is "He who created them anew";
Should their wants be pure, then are they satisfied;
Should he make an incantation, then are the gods appeased;
Should they attack him in anger, he withstandeth their onslaught!
Let him therefore be exalted, and in the assembly of the gods let him... ;
None among the gods can rival him!
15 Tutu [Marduk] is Zi-ukkina, "the Life of the host of the gods,"
Who established for the gods the bright heavens.
He set them on their way, and ordained their path;
Never shall his ... deeds be forgotten among men.
Tutu as Zi-azag thirdly they named, "the Bringer of Purification,"
"The God of the Favoring Breeze," "the Lord of Hearing and Mercy,"
"The Creator of Fulness and Abundance," " the Founder of Plenteousness,"
"Who increaseth all that is small."
In sore distress we felt his favoring breeze,"
Let them say, let them pay reverence, let them bow in humility before him!
Tutu as Aga-azag may mankind fourthly magnify!
"The Lord of the Pure Incantation," " the Quickener of the Dead,"
"Who had mercy upon the captive gods,"
"Who removed the yoke from upon the gods his enemies,"
"For their forgiveness did he create mankind,"
"The Merciful One, with whom it is to bestow life!"
May his deeds endure, may they never be forgotten ,
In the mouth of mankind whom his hands have made!
Tutu as Mu-azag, fifthly, his "Pure incantation" may their mouth proclaim,
Who through his Pure Incantation hath destroyed all the evil ones!"
Sag-zu, [Marduk] "who knoweth the heart of the gods," " who seeth through the innermost part!"
"The evil-doer he hath not caused to go forth with him!"
"Founder of the assembly of the gods," who ... their heart!"
"Subduer of the disobedient," "...!"
"Director of Righteousness," "...,"
" Who rebellion and...!"
Tutu as Zi-si, "the ...,"
"Who put an end to anger," "who...!"
Tutu as Suh-kur, thirdly, "the Destroyer of the foe,"
"Who put their plans to confusion,"
"Who destroyed all the wicked," "...,"
... let them... !
who...
He named the four quarters of the world, mankind hecreated,
And upon him understanding...
"The mighty one...!"
Agil...
"The Creator of the earth...!"

The Structure of Organization

Zulummu... .
"The Giver of counsel and of whatsoever...!"
Mummu, " the Creator of...!"
Mulil, the heavens...,
"Who for...!"
Giskul, let...,
"Who brought the gods to naught....!".....
... " the Chief of all lords,"
... supreme is his might!
Lugal-durmah, "the King of the band of the gods," " the Lord of rulers."
"Who is exalted in a royal habitation,"
"Who among the gods is gloriously supreme!
Adu-nuna, " the Counselor of Ea," who created the gods his fathers,
Unto the path of whose majesty
No god can ever attain!
... in Dul-azag be made it known,
... pure is his dwelling!
... the... of those without understanding is Lugaldul-azaga!
... supreme is his might!
... their... in the midst of Tiamat,
... of the battle!
... the star, which shineth in the heavens.
May he hold the Beginning and the Future, may they pay homage unto him,
Saying, "He who forced his way through the midst of Tiamat without resting,
Let his name be Nibiru, 'the Seizer of the Midst'!
For the stars of heaven he upheld the paths,
He shepherded all the gods like sheep!
He conquered Tiamat, he troubled and ended her life,"
In the future of mankind, when the days grow old,
May this be heard without ceasing; may it hold sway forever!
Since he created the realm of heaven and fashioned the firm earth,
The Lord of the World," the father Bel hath called his name.
This title, which all the Spirits of Heaven proclaimed,
Did Ea hear, and his spirit was rejoiced, and he said:
"He whose name his fathers have made glorious,
Shall be even as I, his name shall be Ea!
The binding of all my decrees shall he control,
All my commands shall he make known! "
By the name of "Fifty " did the great gods
Proclaim his fifty names, they, made his path preeminent.
(Heidel: 1970)(Frankfort: 1954) (Dalley: 2009) and (Oppenheim: 1969).

Epilogue

Let them [i.e. the names of Marduk] be held in remembrances and let the first man proclaim them;
Let the wise and the understanding consider them together!
Let the father repeat them and teach them to his son;
Let them be in the ears of the pastor and the shepherd!
Let a man rejoice in Marduk, the Lord of the gods,
That be may cause his land to be fruitful, and that he himself may have prosperity!
His word standeth fast, his command is unaltered;
The utterance of his mouth hath no god ever annulled.
He gazed in his anger, he turned not his neck;
When he is wroth, no god can withstand his indignation.
Wide is his heart, broad is his compassion;
The sinner and evil-doer in his presence...
They received instruction, they spake before him,
... unto...
... of Marduk may the gods...;

The Structure of Organization

... May they ... his name... !
... they took and...
.....!
(Heidel: 1970)(Frankfort: 1954) (Dalley: 2009) and (Oppenheim: 1969).

4.3.3. Analyzing the Mesopotamian Myth

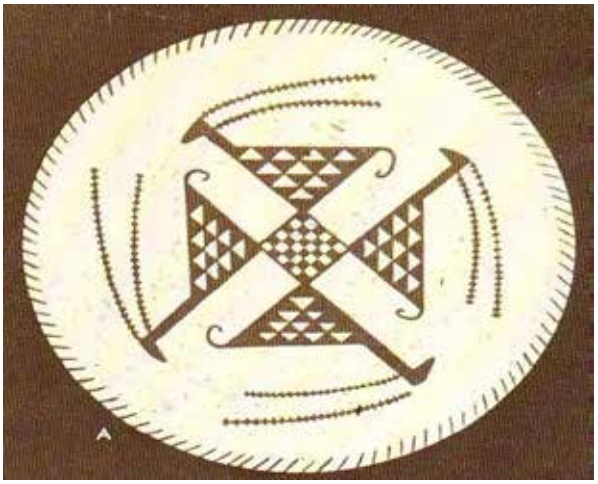
We will apply the Matrix Analysis of Myth on Mesopotamian Myth, after we tried several arrangements for the main structures until we found one of them to be harmonious with the bases mentioned in the anthropological analysis of the myth for Levi-Strauss. So, Diagram: 4.2 and Figure: 4.0: Describe the best arrangement of the Mesopotamian myth by using the matrix analysis of the Sumerian - Akkadian myth. Diagram: 4.3 and Figure: 4.1: Describe the best arrangement of the Mesopotamian myth by using the matrix analysis of the Babylonian - Assyrian myth.

Diagram:4.2: Matrix Analysis of the Sumerian - Akkadian Myth.

Water of geneses								
	Enki decides fates	Enana God of heaven						
	Enki God of wisdom	Enlil Born						
			Enana in absu	Enana sitting on the table of heaven				
				Enana takes laws of civilization				
					Enana in Uruk			
						Enki bless Uruk		
							Build a sanctuary priest	
								Smiling people of Uruk

Path of Telling the Myth

Figure:4.0: The Code of Genesis in the Sumerian - Akkadian Myth.



(Source: Andre: 1979: 93).

Diagram:4.3: Matrix Analysis of the Babylonian - Assyrian Myth.

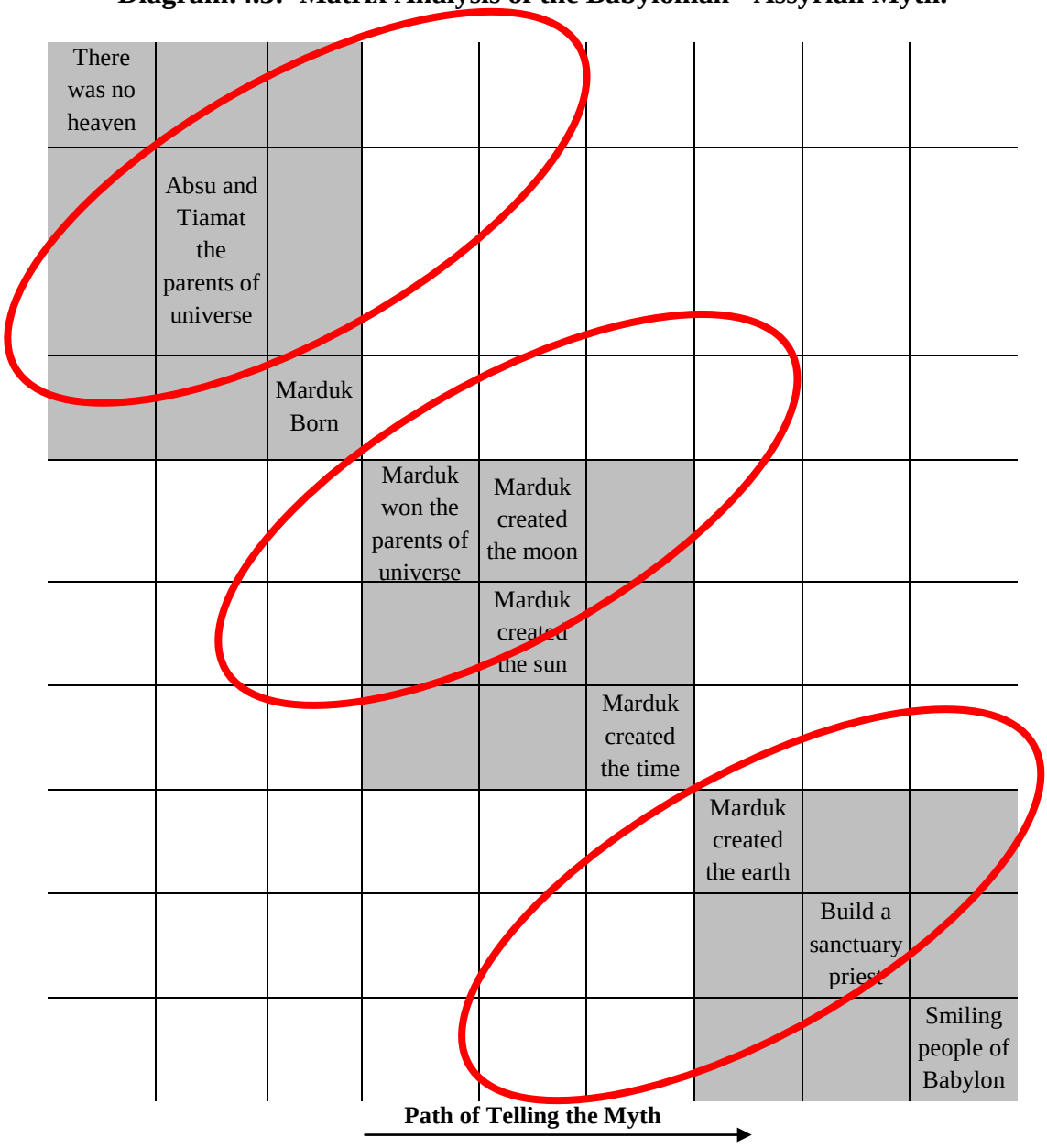
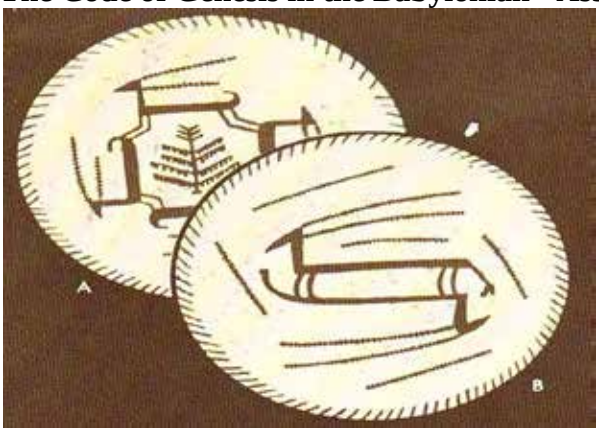


Figure:4.1: The Code of Genesis in the Babylonian - Assyrian Myth.



(Source: Andre: 1979: 93).

The structural analysis of the Mesopotamian myth of genesis Sumerian - Akkadian and Babylonian - Assyrian shows that, the basic structure of the Mesopotamians' view to their universe has become clear.

The Mesopotamian universe was not universe, as in the case of our universe which involves two parts of the matter; the live and the inanimate, and it didn't involve variant levels of reality. So, all that was known then by sense or experience had a stable permanence and it was considered as part of the universe. Then all that is in the world, whether live or inanimate or an abstract idea - every stone, tree or a notion - enjoys a self-will and a special character.

Therefore, the system of the existence, that arrangement and that context that are seen by the human in the universe - after making it a universe assembled from individual persons - has not represented in the mind of the human but in one context; which is the system of wills. So, the universe as a whole is harmonious and it is nothing but a will.

The universe includes all the existence, everything that can be considered as an entity, even the abstract idea; and these entities have their own wills and they are not in the same level, and the measure of excellence amongst them is power.

- The Sky: It plays a great role - even if that was in the meaning of place or a space - in constituting the visible universe, and the high location it occupies as being above everything, which explains why it is considered the most important power in the universe.
- The Air: Everyone who experienced a storm in Mesopotamia realizes the awe of this cosmic power because the storm is the master of the space under the sky and it should be regarded as the second element in the universe.

- The Earth: It is the third visible element in the universe and because of its closeness to the human and its importance in his life in different domains, it was not easy to recognize it and restrict it within one concept; so we see it as the idea of the mother land.
- The Water: The donor of life which emanates from a great underground sea and because it is considered the spring of life it was regarded as the master of the earth.

The two Mesopotamian myths of genesis demonstrate the three stages of the holy history, which are:

- The First Stage: The Sumerians - Akkadians and the Babylonians - Assyrians myth of genesis formed an influential mythological vision. The first stage of the history which lies in the dormant eternity which is lopsided on itself, is self-sufficient. So, choosing the water as an essence to its three primeval entities stressed the state of the first primordial - aquatic of each shape because the water around us is a representation of everything which is without taste, without consistency or dimensions; it is the non-shape with no doubt. Just as the entities composed by the primeval father, mother and son are not independent, but mixed and interrelated without any separation, i.e. the theological concepts which are three hypostases integrated in one, it is meaningless to have three independent water entities, at the same time, in a state of perpetual intermixing and mingling (Cassirer: 1977: 104:105) (Heidel: 1970: 63).
- The Second Stage: After that the myth moves to the second stage; the stage of the cosmic time, from which the universe emanated from the primordial, and time from the perpetuity. This first primordial mass is differentiated gradually

by means of reproduction, and so the second generation of gods was the result. With the emergence of this generation of gods the time-signs begin and we approach it from the cosmic isthmus. The myth expresses that by the dynamics issued by the new gods, against that absolute silence which was the dominant feature of the motionless perpetuity. In the high sky and in the depth of water, which are mingled in silence and quietness, those began motion, and that caused a gap in the state of stillness that can be mended because the universe prepares to leap from the womb of the primordial as the motion set out and there is nothing that can stop it. So, stillness collided with the motion and resulted in struggles that led to the start of the history as it begins from the raising of the sky and the extension -spreading of the earth (Cassirer: 1977: 104:105)(Heidel: 1970:63).

§ The Third Stage: Time set out to make the third stage of the history begin, where the myth appears to accompany genesis with the emergence of time. Time becomes in order and these activities end with building up the human city and its grand temple designated to worship the god. Nothing is left except the creation of man who will be the successor on the earth and the steward of his power. Man is created and he has to work hard to earn his living and earn the living for the gods, who will also establish to man the bases of rituals and worships and teach him how to fear the gods. Then he follows that with several regulating activities that put the foundations of human urbanism. We read in the last parts of the two myths how the human learned the names and associated each one of them one of his majestic deeds (Cassirer: 1977: 104:105)(Heidel: 1970: 63).

So, we can summarize the fundamental mythical structures in:

- The Structure of The Origin: Which questions about the cosmic systems, and the crystallization of their origins and core, and the way in which the rise of the birth idea which separated the part from the whole and the answer for it is creation.
- The Structure of The Evaluation: Which wonders the religious systems and the crystallization of their levels and the emergence of sanctification idea, which separated the holy from the unholy, and the answer given is the decision.
- The Structure of The Organization: Which wonders the secular systems, and the crystallization of their levels and the emergence of immorality idea, which separated the soul from the body.

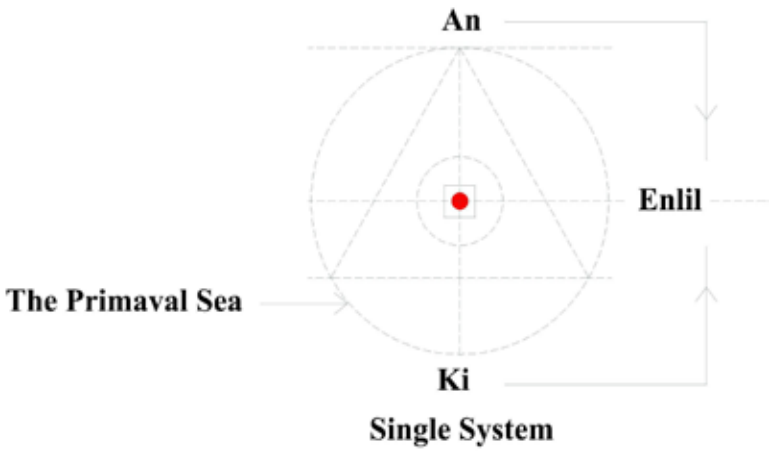
4.3.4. Results of Analyzing the Cultural Core

4.3.4.a. The Structure of Origin

The Sumerian - Akkadian: The Sumerian myth of genesis (Diagram: 4.4) rests on the principle of the basic system: the whole divided into separate parts and each of these parts operated like a whole, per se. According to this concept the beginning and the genesis of the cosmos can be interpreted, because the cosmic system was essentially represented by the cosmic mountain, and that the idea of genesis, the creation of the human and the nature came as a result to the division of the cosmos into parts - single system - and these explain the multiplicity of gods and the level of the cosmos (Kramer: 1961: 30)(Al Sawah: 1985:26:27)(Al Jabri: 1985: 43).

The Sumerians believe in the existence of the cosmic mountain which was originally united and was created by the primeval sea and later on it divided into parts with domination and supremacy.

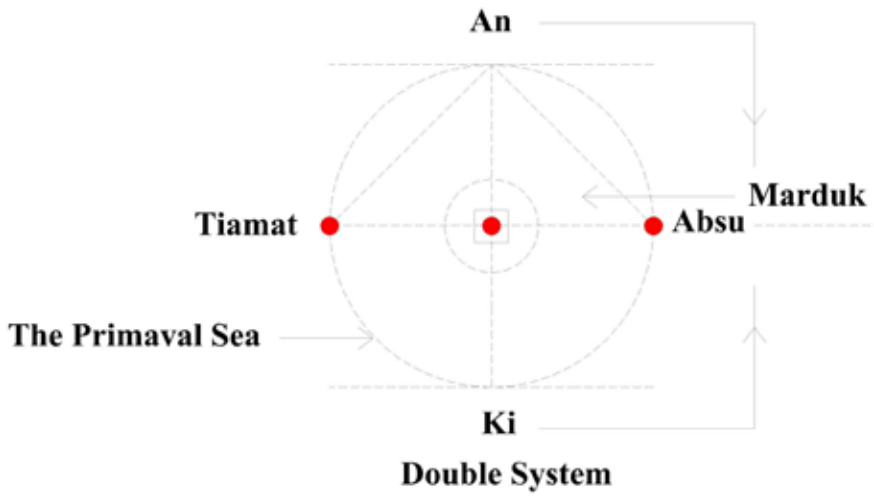
Diagram:4.4: The Structure of Origin for the Sumerian - Akkadian Myth.



The Babylonian - Assyrian: For the Babylonian myth of genesis (Diagram: 4.5), it is on the contrary as it unifies the different phenomena and believes in the duals of the existence. Creation for the Babylonians results from the union of two correspondent elements and a third element results from this unification, and this is called the triple processes of creation (Kramer: 1961: 30)(Al Sawah: 1985: 26:27)(Al Jabri: 1985: 43).

The Babylonians and their followers believe that the cosmos resulted from the unification of two correspondent elements to yield a third element. So, the cosmos, in their conception, is a circular ball which came as a result of the reaction to a third element. Therefore, the ultimate case is the domination of the whole.

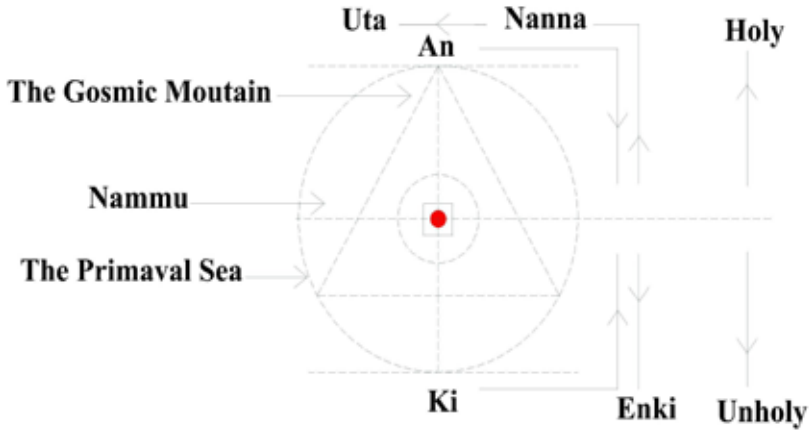
Diagram:4.5: The Structure of Origin for the Babylonian - Assyrian Myth.



4.3.4.b. The Structure of Evaluation

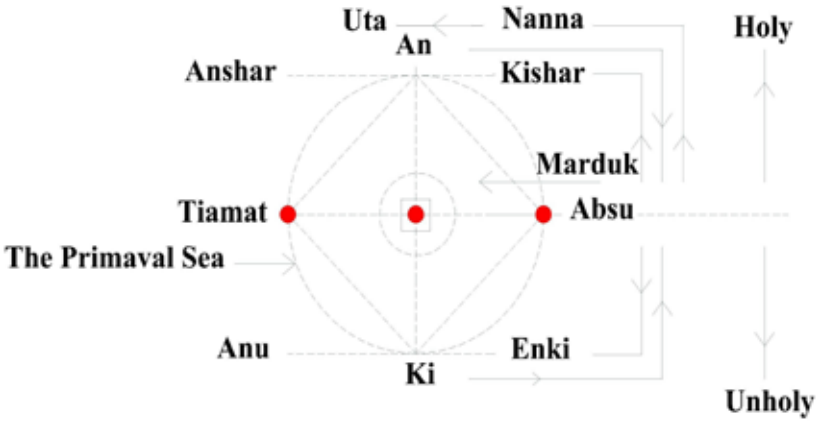
The Sumerian - Akkadian: The genesis for the Sumerians (Diagram: 4.6) was by the existence of the primeval sea and its god Nammu and it is clear that this sea, according to their belief, existed innately and the sea was given birth by the cosmic mountain, which is composed of the sky and his god An the masculine, who represents the summit of the mountain, and the ground its god Ki, the feminine, is the base of the mountain, which was united at the beginning of its emergence with An and Ki the god of air Enlil who disunited the mother from the father. So, An carried the sky upward to the heights and Enlil descended with his mother Ki to the earth (Kramer: 1961: 30)(Al Sawah: 1985: 26:27)(Al Jabri: 1985: 43).

Diagram:4.6: The Structure of Evaluation for the Sumerian - Akkadian Myth.



The Babylonian-Assyrian: The origin of genesis (Diagram: 4.7) for the Babylonians is water with its two kinds; the fresh water Absu and the salty water Tiamat. By the union of these two the god of magic Marduk resulted, and also by the union of these two the god of cloud Nammu resulted and the god of alluvium Antum who appears over the water. From the interaction of the aforementioned elements, the horizon with its two parts; the masculine Kishar and the feminine Anshar have emerged (Kramer: 1961: **60:63**).

Diagram:4.7: The Structure of Evaluation for the Babylonian - Assyrian Myth.

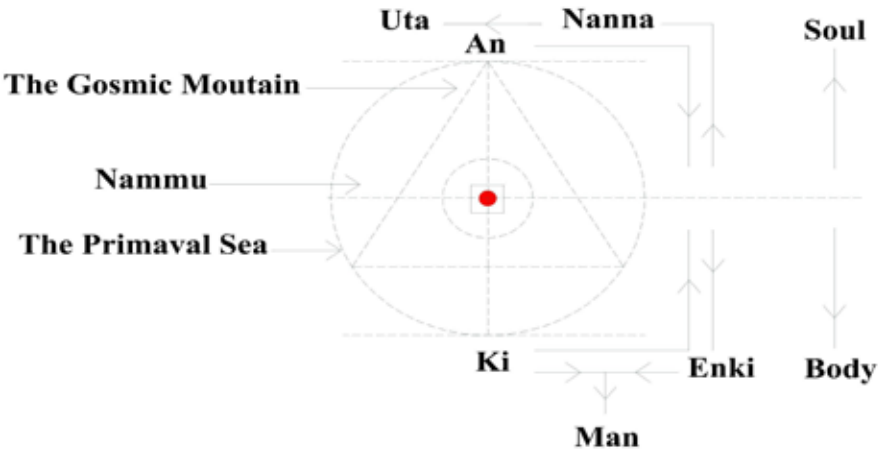


4.3.4.c. The Structure of Organization

The Sumerian - Akadian: After Enlil came down to the earth, he found himself in the deep-black darkness and begot Nanna the god of the moon to light – illuminate - the sky for him. After that, Nanna begot Utu the sun god to be more brilliant and longer in age. While the god of water, Enki, he was standing before the separation of the cosmic mountain. After the separation, he united with Enlil and his mother Ki, and through their union, it was possible for the animals and plants to exist. So, the essence of life is the earth, water and air, but the emergence of man was as a result of the union of Nammu the god of the sea, and Ki the god of earth and Enki the god of water (Kramer: 1961: 30)(Al Sawah: 1985: 26:27)(Al Jabri: 1985: 43).

The Sumerian myth of genesis (Diagram: 4.8) asserts that the human was formed out of clay and for this reason the clay remained a holy material since the early beginnings of the Mesopotamia civilization. The goal of creating the man is to serve the gods and liberating them from labor. So, the human's arts, sciences and literature are all dedicated to the service of the gods (Kramer: 196: 68: 70)(Al Sawah: 1985: 26:27)(Al Jabri: 1985: 43).

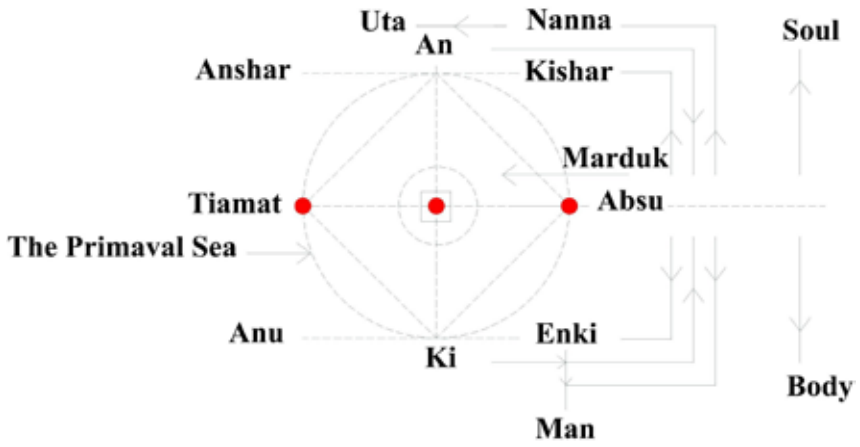
Diagram:4.8: The Structure of Organization for the Sumerian - Akkadian Myth.



The Babylonian - Assyrian: From the completion of the horizon circle, the circular ball of the cosmos appeared. The upper half of this ball constitutes the horizon of the sky and the lower half constitutes the horizon of the earth, after Absu and Tiamat created their son the god of magic Marduk, he created Nanna and Enki (Kramer: 1961: 60:63)(Al Sawah: 1985: 26:27)(Al Jabri: 1985:43).

In the Babylonian myth (Diagram: 4.9) it is mentioned that man was created from the blood of one of the rioter gods who was killed for this reason. Their idea agrees with the idea that humans were created to serve gods and liberate them from the daily work labors and providing them with food.

Diagram:4.9: The Structure of Organization for the Babylonian - Assyrian Myth.



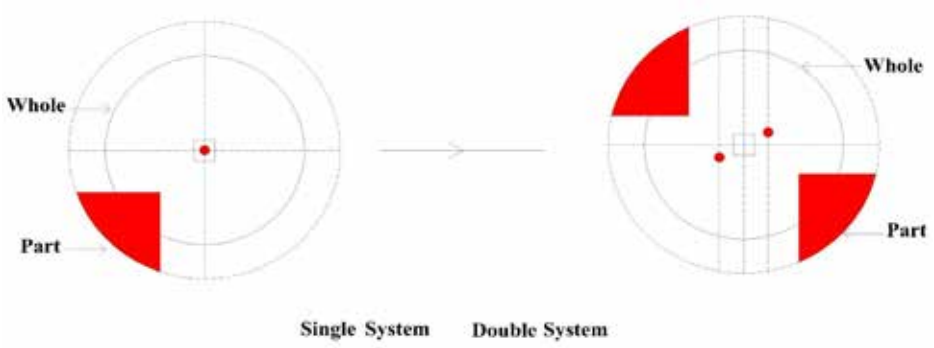
The abstract thought expressions rest on mythical structures that conclude:

- § The structure of origin separated the single - double.
- § The structure of evaluation separated the holy - unholy.
- § The structure of organization separated the body - soul.

§ **Beliefs Related to the Structure of Origin**

This is a transition from the belief in the single of existence and that everything emerges from the whole - a monism system - at Sumerian - Akkadian, into the belief in the double existence and that everything comes as a result from the union of two elements - double system - at Babylonian - Assyrian (Diagram: 4.10).

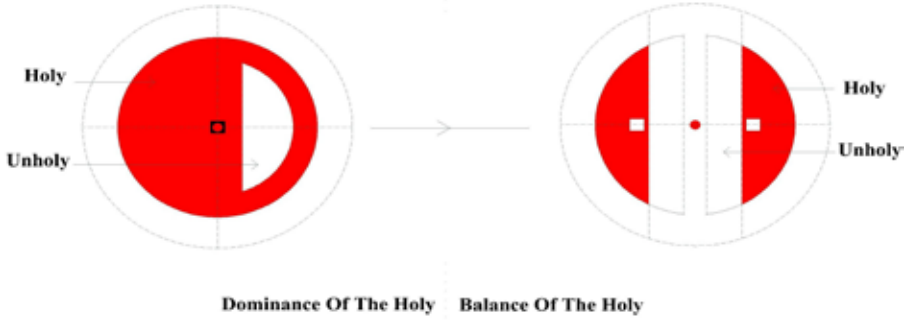
Diagram:4.10: Beliefs Related to the Structure of Origin.



§ **Beliefs Related to the Structure of Evaluation**

The following is the transition from the belief in the domination of the spiritual holy essence of the cosmic system on the unholy in it - the domination of the holy - at Sumerian - Akkadian, into the belief in the balance of the spiritual holy essence of the cosmic system with the unholy in it - the balance of the holy - at Babylonian - Assyrian (Diagram: 4.11).

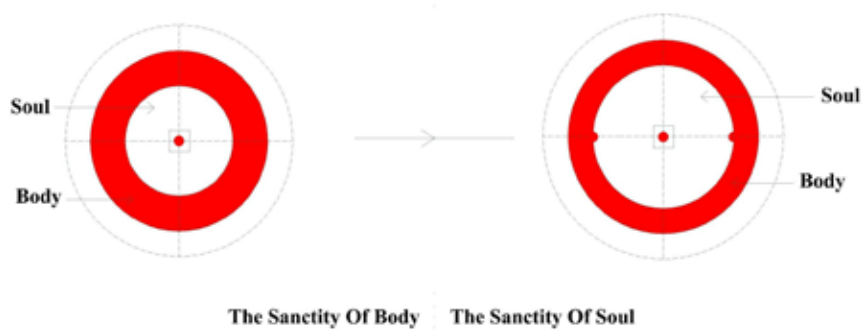
Diagram:4.11: Beliefs Related to the Structure of Evaluation.



§ **Beliefs Related to the Structure of Organization**

This is the transition from the belief in the material essence of the holy - the holiness of the body - at Sumerian - Akkadian, into the belief in the immaterial - material essence of the holy - the holiness of the soul and body - at Babylonian - Assyrian (Diagram: 4.12).

Diagram:4.12: Beliefs Related to the Structure of Organization.



4.3.5. A New Vision

What was presented about the analysis of the Mesopotamian core of the cultural product, represented by the Mesopotamian myth of genesis Sumerian - Akkadian on the one hand and the Babylonian - Assyrian on the other, has enabled diagnosing its main structures , which are represented by three main structures that formed the structure of its mental expressions. This was represented by the structure of the origin single - double, the structure of evaluation holy - unholy and the structure of organization body - soul constitute as a whole the signifier values of the prototype. So, In the case of the installation of the signifier values on this structures we get the following matrix (Diagram:4.2.).

Diagram:4.13: Matrix of installation the signifier values of the Mesopotamian cultural product on the main structures that formed the structure of its mental expressions.

signifier values

single	double
.	.
holy	unholy
.	.
body	soul
.	.

Also, the study of the Mesopotamian mythological-ideological thought motivate us to say that there is a fundamental transition between the thought structure of the Sumerians - Akkadians and the thought structure of the Babylonian - Assyrians , what has been tackled about the perspective of creation and genesis for the Sumerians and Babylonians explicitly construes the basis of this difference enabling us from scrutinizing the legendary thought structure for each of them.

The Mesopotamian mythology - Sumerian-Akkadian - is based on the experimental methodology because it relies on the transition from the whole to the parts. It depends on the experiment as a basis for knowledge, and the base of this knowledge is the accurate observation and scrutinizing the cosmic facts and concepts and other things by the transfer from the parts to the whole. And we can conclude, that the Sumerians - Akkadians are ideal experimentalists.

The Babylonian - Assyrian mythology shows an important difference from Sumerian - Akkadian mythology and this is basically reflected in the dominant thought structure whose beginnings are evident in the Babylonian thought and develops clearly in the Assyrian thought. Here we find the thought structure (idea) rationalism as the Babylonians view the world as a system in which parts play an important role within the integral whole and the knowledge, in their point of view,

exists in the mind originally, and it is sent down by the gods and its center is the mind. It is objective and independent from the self and relies on deduction as a methodology to gain knowledge. This knowledge was enhanced for the Assyrians and we can conclude, that the Babylonians-Assyrians are ideal rationalists.

The thought - cultural attitude that constitute epistemology can be summarized by the changed matrix in the thought and epistemological orientation (Table:4.0).

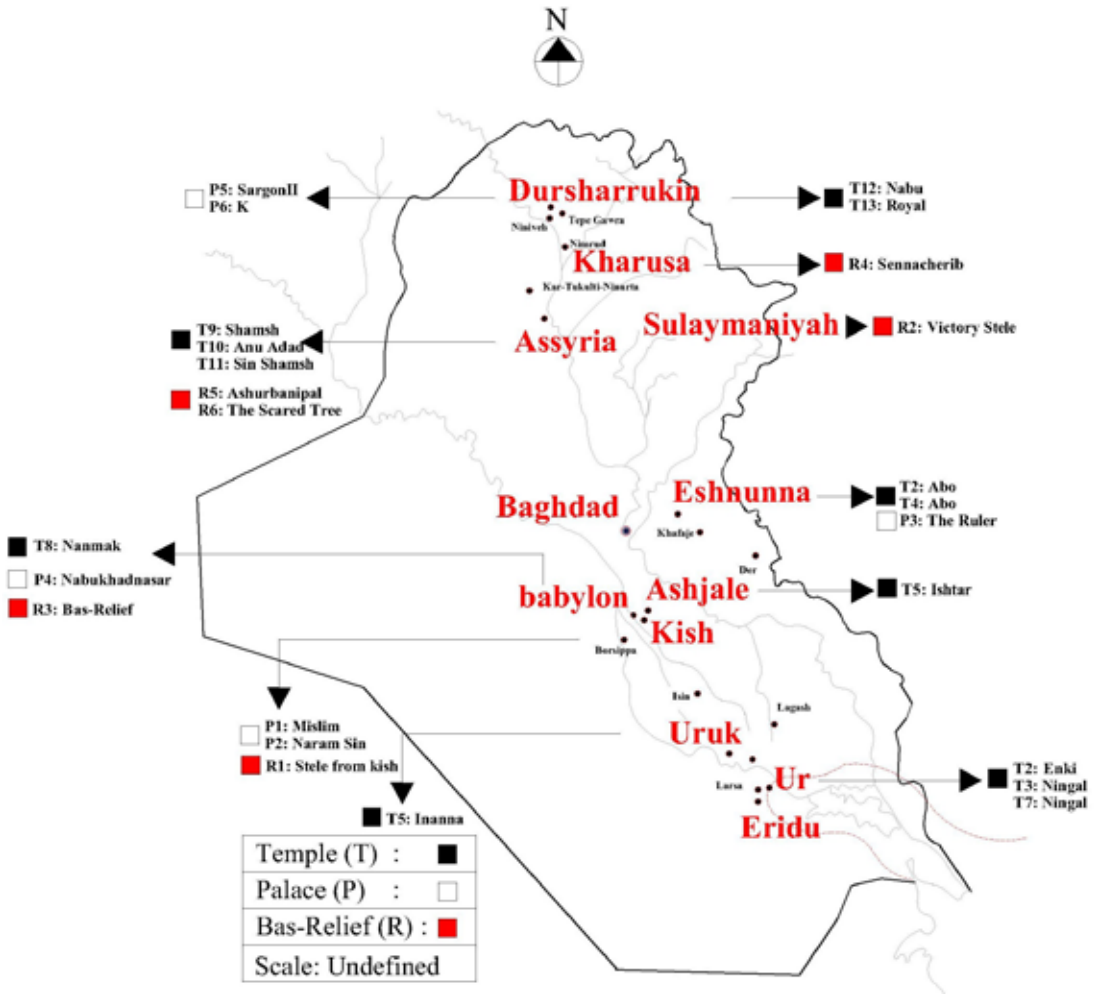
Table:4.0: The Change Matrix in the Thought and Epistemological Orientation.

Sumerian - Akkadian	Ideal experimentalists : a knowledge whose base is experiment, yet of absolute ideal values.	Care for the whole values, yet no care for the values of the part
Babylonian - Assyrian	Ideal rationalism : knowledge is a priori revealed from the gods and is concentrated in mind.	Care for the values of the whole along with the values of the parts.

4.4. Temporal - Spatial and Characterization Limits of the Mesopotamian Cultural - Architectural Product

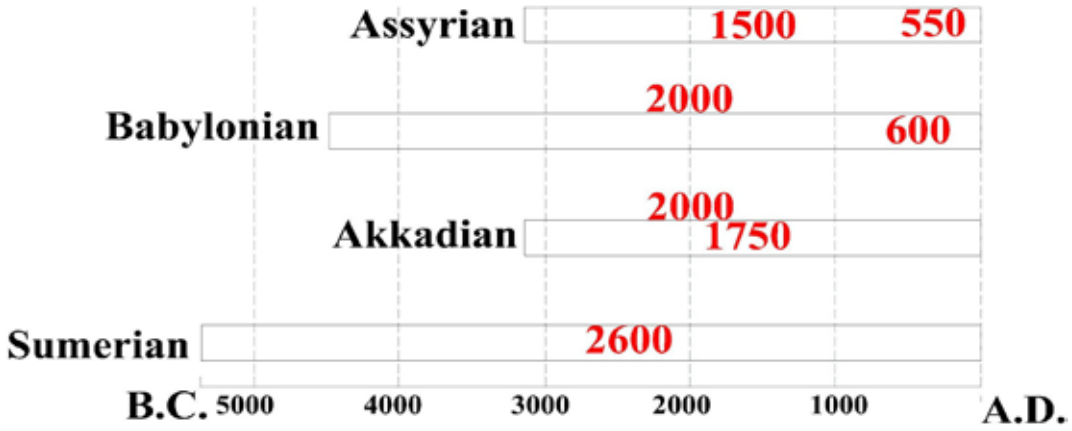
The fact in this subject lies in the difficulty of identifying the relevant case horizontally and vertically, i.e. identifying the case within a certain period of time and a certain place in harmony with the general hypothesis of the study. So, the study, in this approach, will depend on the spatial and temporal[89] survey of the civilization of Mesopotamia as a whole (Figure: 4.2, and 4.3).

Figure:4.2: Spatial Limits of the Mesopotamian Cultural - Architectural Product.



(Source: The Author: From the Map That are Documented in:Yosuf:1982).

Figure:4.3: Temporal Limits of the Mesopotamian Cultural - Architectural Product.



(Source: The Author: From the Map That are Documented in:Yosuf:1982).

The need for the final identifying of the characterizations to verifying the study hypothesis relevant to this subject:

- The selected cultural - architectural models are not subjected to certain measurement definitions.
- The selected cultural - architectural models are not subjected to certain functional definitions.
- The selected cultural - architectural models are not subjected to certain stylistic definitions.

1. Concentration will be on the general monumentally - sculpturally cultural-architectural products such as temples - A temple (from the Latin word templum) is a structure reserved for religious or spiritual activities, such as prayer and sacrifice, or analogous rites - and palaces - A palace is a grand residence, especially a royal residence or the home of a head of state or some other high - ranking dignitary - that are considered original models, which

emerged in the era of Mesopotamia civilization, or it was characterized by a certain feature related to the Mesopotamian eras and which didn't appear in any other civilization.

2. The cultural - architectural products were selected from prominent golden eras in Mesopotamia and not in the early emergence or at the late ages, because the early periods were characterized with building up thought in the Mesopotamian society rather than focusing on the architectural aspects. So, we can see that most of the models were simple and confined to the main and essential construction elements, while the historical eras were featured with the local influences.
3. The degree of documenting the selected cultural architectural models (Figure: 4.2) is a decisive factor in identifying the models selected, and that prevented the research from extending in its planning aspect, i.e. on the level of the urban pattern, which is due to the impossibility of obtaining plans of remaining cities from that era with all the details so it can assist in this research. The accuracy of documentation varied, in relation to the models selected, between the site documentation, investigation, written description and investigation and description provided with precise description which is equipped with accurate standard plans.
4. Cultural architectural models in which functional features are dominant over the symbolic feature, like the continuous markets and general bathhouses, were not taken into consideration, basically as these models don't reflect important achievements of the Mesopotamians through these buildings (Tables:4.1,4.2,4.3, and4.4).

Figure:4.4: The Selected Cultural - Architectural Models Documenting by the Archaeologists Team and the Author.

(Source: Photographic Documentation by the Author:2009&2010).

Table:4.1: The Selected Mesopotamian Cultural - Architectural Product: The Temenos.

Architectural Product	Code	Title	Place	Time B.C.	Culture
Temenos	C1	Ur	Ur	4500	Sumerian
	C2	Babylon	Babylon	3000	Babylonian
	C3	Dursharrukin	Nineveh	1500	Assyrian

Table:4.2: The Selected Mesopotamian Cultural - Architectural Product: The Temple.

Architectural Product	Code	Title	Place	Time B.C.	Culture
Temple	**T1**	Abo	Eshnunna	2000	Sumerian
	T2	Enki	Ur	1700	Sumerian
	T3	Ningal	Ur	1700	Sumerian
	T4	Abo	Eshnunna	1750	Akadian
	T5	Ishtar	Ashjale	1500	Babylonian
	T6	Inanna	Uruk	1500	Babylonian
	T7	Ningal	Ur	1400	Babylonian
	T8	Nanmak	Babylon	1300	Babylonian
	T9	Sin-Shamsh	Assyria	1500	Assyrian
	T10	Anu-Adad	Assyria	1200	Assyrian
	T11	Sin-Shamsh	Assyria	650	Assyrian
	T12	Nabu	Dursharrukin	600	Assyrian
	T13	Royal	Dursharrukin	550	Assyrian

Table:4.3: The Selected Mesopotamian Cultural - Architectural Product: The Palace.

Architectural Product	Code	Title	Place	Time B.C.	Culture
Palace	**P1**	Mislim	Kish	2600	Sumerian
	P2	Naram-Sin	Kish	2000	Akadian
	P3	The Ruler	Eshnunna	2000	Babylonian
	P4	Nabukhadnasar	Babylon	600	Babylonian
	P5	Sargon II	Dursharrukin	700	Assyrian
	P6	K	Dursharrukin	650	Assyrian

Table:4.4: The Selected Mesopotamian Cultural - Architectural Product: The Stele, Bas-Relief, and Cylinder Seal.

Architectural Product	Code	Title	Place	Time B.C.	Culture
Stele, Bas-Relief And Cylinder Seal	**R1**	Stele from kish	Kish	2500	Sumerian
	R2	Victory Stele	Sulaymaniyah	2255	Akkadian
	R3	Bas-Relief	Babylon	870	Babylonian
	R4	Sennacherib	kharusa	2700	Assyrian
	R5	Ashurbanipal	Nineveh	1800	Assyrian
	R6	The Scared Tree	Assyria	1500	Assyrian

4.5. The Cultural - Architectural Product

4.5.1. The Temenos[90]

The Temenos represents the meeting point of the earth and the sky and it reminds the Mesopotamians of the permanent presence of the Gods, which results from the belief in the holiness of the location. It is the heavenly house of the Gods, their place of residence when they come down to the earth and that made their directions to the holy cosmic corners. The temple was directed to the holy cosmic corners, but the palace is slightly deviated. So, it is the first element that was built in the ancient cities of Mesopotamia. The temenos were built in the same places as a respect to their holiness. If the old temenos was ruined, the new builder resorted to demolishing the ruins and making an elevation over it making a bench for it as the new base of the new one.

That resulted in the construction of one after another temenos, built in different ages and on the same location. This turned the location of the temenos into an elevated land or into a hill. This feature acquired symbolic dimensions until the temenos became an elevated plateau, which overlooks the urban scene - landscape - and that was one of the important landmarks of the Mesopotamian city, whether they were natural as a result of the repeated layers of building, or artificial such as in the newly constructed cities. The urban temenos changed into a landmark that dominates the urban scene.

The first and the most important element which was constructed in the Mesopotamian city was the temple. For the Mesopotamians, the temple stood for the dwelling of the Gods on the earth. So, it enjoys a high sanctity which is reflected on

the site of the temple per se. Since the fifth thousand B.C. the temple was found with evident signs and use (Al Badrawi: 1985: 308).

The transformation of the temenos is related to the components of the temenos as the temple represented the essential element in the pre history eras and the early beginnings of dynasties(91) and in these eras the temple owned absolute power (Lampl: 1968: 14:15).

In the mid of the third thousand B.C. and by the emergence of the palace as a new type of construction due to the separation of the legislative and religious authorities, the temenos embraced the temple of the temples in addition to the royal palace (Lampl: 1968: 14:15).

4.5.2. The Temple

Gods' houses on the earth, the temples play an important and vital role in all the fields of life especially in the ages where the religious and the secular authorities were incorporated. The development of the temple as a cultural architectural model was directly connected to the development of its consideration, its role in the society and it was characterized with its high-level monumentally-sculptural architecture.

4.5.2.a. The Temple: Basic Types

Low Temples: These temples represent the basic model of the Mesopotamian temple. It is basically a simple building consisting of a small space called the sanctuary or the cella(92) and in its end there are a niche(93) and an altar(94) several low temples were discovered.

- Separate or independent temples.
- Temples incorporated with the palace or adjacent to it.

§ Temples incorporated with the ziggurat[95].

High Temples: The basis of the high temples idea might be a product of the repeated construction of temples on the same site. Through time a highland or a natural hill evolved mounted by the new temple. This concept developed to the idea of employing the highland in a distinguished way as a stage for the temple. Later on a highland was constructed with enormous heights. In essence, there are two basic types of elevated temples, which are:

§ Mastaba[96]**(**Figure: 4.5).

§ Ziggurat (Figure: 4.6).

Figure:4.5: Mastaba: Sumerian Culture: The White Temple 2800 B.C. at Uruk, From Frankfort:1996.

(Source: Photographic Documentation by the Author: 2010).

Figure:4.6: Ziggurat: Sumerian Culture: Ur Nammu Ziggurat 2125 B.C. at Ur, From Fletcher:1975.

(Source: Photographic Documentation by the Author: 2010).

4.5.2.b. The Temple: Basic Components

The Basic Unit: The temple had a basic unit that started to crystallize since the early ages and its maximum expressing phases were in the Assyrian and the Babylonian temples. The unit gets along with the following essential elements:

- Cella: The essential element in the temple.
- Ante Cella: Is a space that precedes the cella. Mostly, it is a rectangular or a square whose side equals the side of the adjacent longitudinal or transverse cella.
- Entrances: The entrance in a temple is an opening in the main external wall of the temple and it is of special importance. It points to the transfer from the general space and the internal special space. Thus, it has great importance in handling and this importance is characterized by surrounding it with huge ornamented and adorned towers in addition to the gates with high fortification.
- The Courtyard: It is an open space to the sky. It is of particular importance and it points to the transfer from the internal transverse special space into the external longitudinal space and that bestows it a distinguished importance embodied by the walls encircling it.

These components are the most important in the model of the temple. Secondary components were added, since the early models, they are mostly for the service of the temple, the residence of priests and monks and for preparing the offerings and others.

4.5.3. The Palace

The residential place of the king is the palace. With the growth and stability of the central power, the palace played a very vital role in formulating the administrative and the political center. With the change of the political domination centers and the separation of the secular-legislative authority from the religious authority, the palace emerged and developed as a new cultural architectural model

and it was characterized with its high-level of monumentally - sculptural constructions.

4.5.3.a. The Palace: Basic Types

Royal palaces: These palaces began to develop as a distinguished architectural model of the Assyrian architecture in particular as we can see the clear distinction between the royal palace which is a place for his residence and rule, and other palaces.

Secondary Palaces: These palaces are for the dwelling of the crown prince or the senior official of the state. The Assyrians developed this kind of palaces and the Babylonian did so also but less than the Assyrians did. The Assyrian cities were famous in having more than one secondary palace, some of which were inside the main boarders and some on the extremes.

4.5.3.b. The Palace: Basic Components

The Basic Unit: The palace had a basic unit that started to crystallize since the early ages and its maximum expressing phases were in the Assyrian and the Babylonian palaces. The unit gets along with the following essential elements:

- The Main Reception Hall: This hall was developed later on to be the throne room(97) and it could be easily noticed in the early models of palaces.
- The Reception Hall: It is the main yard on which the throne room overlooks. It is an important hall and its internal walls are adorned with mural engravings and huge story scenes of bas-relief. The reception hall is considered the main hall in the palace and it is regarded as the main

distributor of movement in the palace, while the royal suite is accessed from the throne room exclusively especially in the late ages.

- The Entrance: The entrance in a palace is an opening in the main external wall of the palace and it is of special importance. It points to the transfer from the general space and the internal special space. Thus, it has a great importance in handling and this importance is characterized by surrounding it with huge ornamented and adorned towers in addition to the gates with high fortification.
- The Royal Suite: It is adjacent to the throne room and connected to it directly by means of openings or by a vestibule which leads to its yard. The suite, mostly, consists of several secondary independent suites and each one of these is surrounded with a small hall but they are all connected with the same spatial joint.
- The Courtyard: It is a space open to the sky and it is of a particular importance. This courtyard determines the transfer from the private transverse space into the longitudinal external space and this adds to it a distinguished importance embodied in rendering the walls surrounding it.

These components are the most important in the model of the palace. Secondary components were added, since the early models were mostly for the service of the palace, the residence of managerial staff and employees.

4.5.4. Stele[98], Bas-Relief, and Cylinder Seal

Adobe - the mud - clay - , the holy material in Mesopotamia is a soft material and easy to be formed, and this achieved a distinguished formational and expressive capability as it contributed to inventing prominent ornaments, the Bas-Relief[99] instead of the hollow ones which were done at first by using the clay but later on they were accomplished using the prominent sculpture with stones or the glazed adobe, using sculpture on a background of stone. The idea of prominent ornament on clay contributed to inventing the cylinder seals[100] .

4.6. Analyzing and Results

4.6.1. Analyzing the Cultural - Architectural Product

The methodology of analysis of the cultural architectural product rests on the analyzing of the main regulating lines -lineaments- through:

4.6.1.a. Identifying the Components

Identifying the most important quantifiable variables concerning the main regulating lines - Lineaments - on which the cultural architectural product depends.

Temenos: Basic Components:

- Temple.
- Palace.

Temple: Basic Components:

- Cella.
- Ante Cella.
- Entrances.

- The Courtyard.

Palace: Basic Components:

- The Main Reception Hall.
- The Reception Hall.
- The Entrance.
- The Royal Suite.
- The Courtyard.
- Administrative Services.
- Sanctuary.

Stele, Bas-Relief, and Cylinder Seal.

4.6.1.b. Identifying the Technique

Identifying the measurement cases for the main regulating lines - lineaments - and the required measurement cases of the variables were enlisted in the application form that includes three main rows which were reached through the theoretical framework.

- Diagnosing the core of the formation.
- Diagnosing the joints of the formation.
- Diagnosing the structure of the formation.

This was represented by the structure of the whole - part, the structure of public - private and the structure of mass - void constitute as a whole the signified values of the prototype. So, In the case of the installation of the signified values on this structures we get the following matrix (Diagram:4.3.).

Diagram:4.14: Matrix of installation the signified values of the Mesopotamian cultural product on the main structures that formed the structure of its architectural expressions.

signified values

whole	part
.	.
public	private
.	.
mass	void
.	.

In addition to what has been mentioned above - the application form - involves:

- § Identification between the signifier and signified values for architectural prototype.
- § Temporal - Spatial determinations for the cultural - architectural product.
- § General information for the cultural - architectural product.
- § The key of the basic components for each cultural - architectural product.

All this makes the process of analysis possible.

4.6.2. Applying the Analysis of the Cultural - Architectural Product

The application involves the analysis of the cultural architectural product according to the sequence shown in Table: 4.1,4.2,4.3, and 4.4 in all its levels.

The Temenos as:

- § C1: Figures: 4.7, & 4.10.
- § C2: Figures: 4.8 , & 4.11.
- § C3: Figures: 4.9, & 4.12.

The Temple as:

- § T1: Figures: 4.13, & 5.12.
- § T2: Figure: 4.17.

- T3: Figures: 4.18, 4.19, & 4.20.
- T4: Figure: 4.21.
- T5: Figures: 4.22, & 4.23.
- T6: Figures: 4.14, & 4.24.
- T7: Figure: 4.25.
- T8: Figure: 4.26.
- T9: Figures: 4.15, & 4.27.
- T10: Figure: 4.28.
- T11: Figure: 4.29.
- T12: Figure: 4.30.
- T13: Figure: 4.31.

The Palace as:

- P1: Figures: 4.32, & 4.35.
- P2: Figure: 4.36.
- P3: Figures: 4.33,4.37, & 4.38.
- P4: Figures: 4.39, & 4.40.
- P5: Figures: 4.34, & 4.41.
- P6: Figure: 4.42.

The Stele, Bas-Relief, and Cylinder Seal as:

- R1: Figures: 4.43, & 4.46.
- R2: Figures: 4.47.
- R3: Figures: 4.44, & 4.48.
- R4: Figure: 4.49.
- R5: Figure: 4.45, & 4.50.
- R6: Figure: 4.51.

4.6.2.a. Applying the Analysis: The Temenos

Figures:4.7: The Cultural - Architectural Product: C1.

Architectural product	Code	Title	Place	Time B.C	Culture
Temenos	C1	Ur	Ur	4500	Sumerian

(Source: Photographic Documentation by the Author: 2010).

Figures:4.8: The Cultural - Architectural Product: C2.

Architectural product	Code	Title	Place	Time B.C	Culture
Temenos	C2	Babylon	Babylon	3000	Babylonian

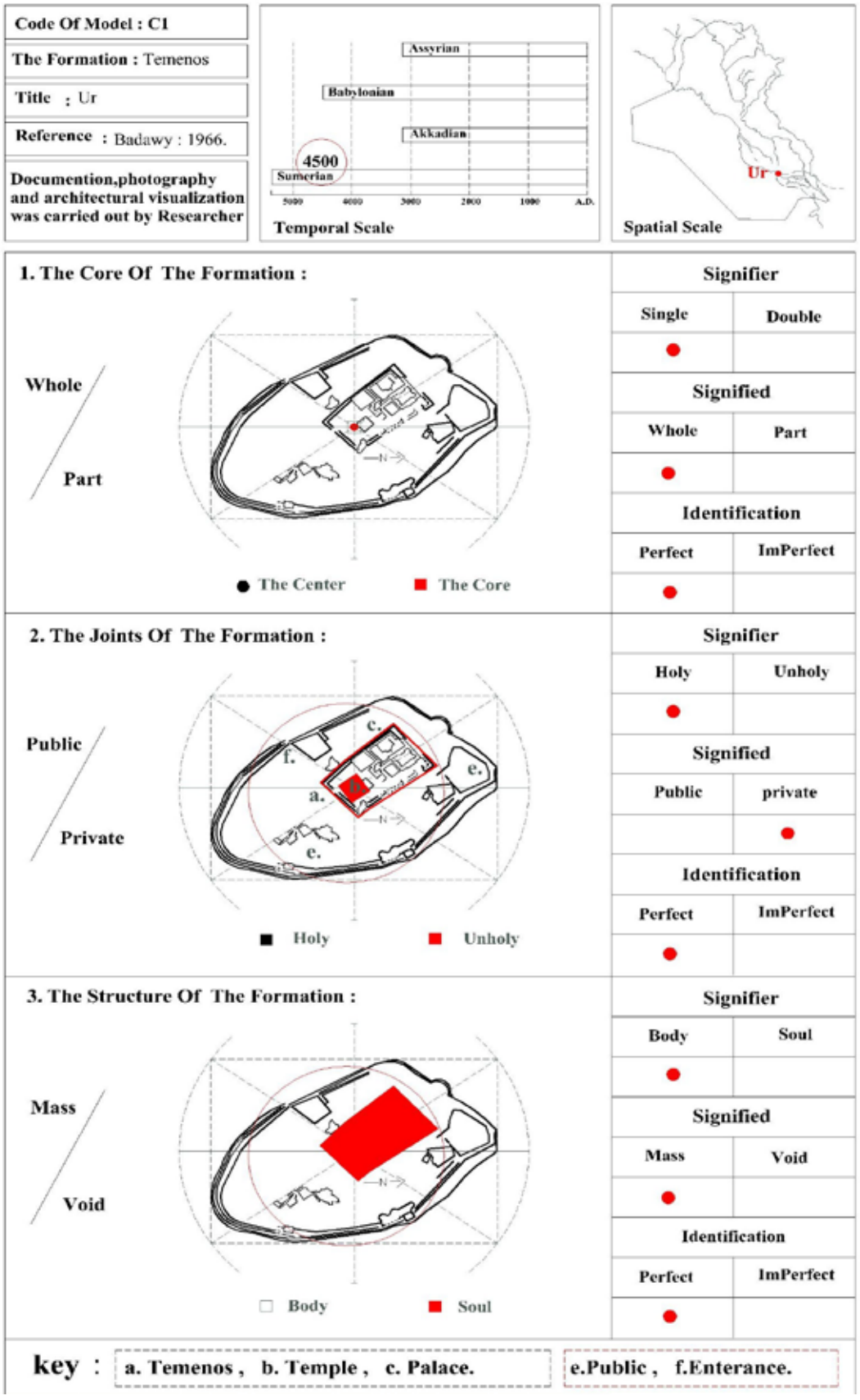
(Source: Photographic Documentation by the Author: 2010).

Figures:4.9: The Cultural - Architectural Product: C3.

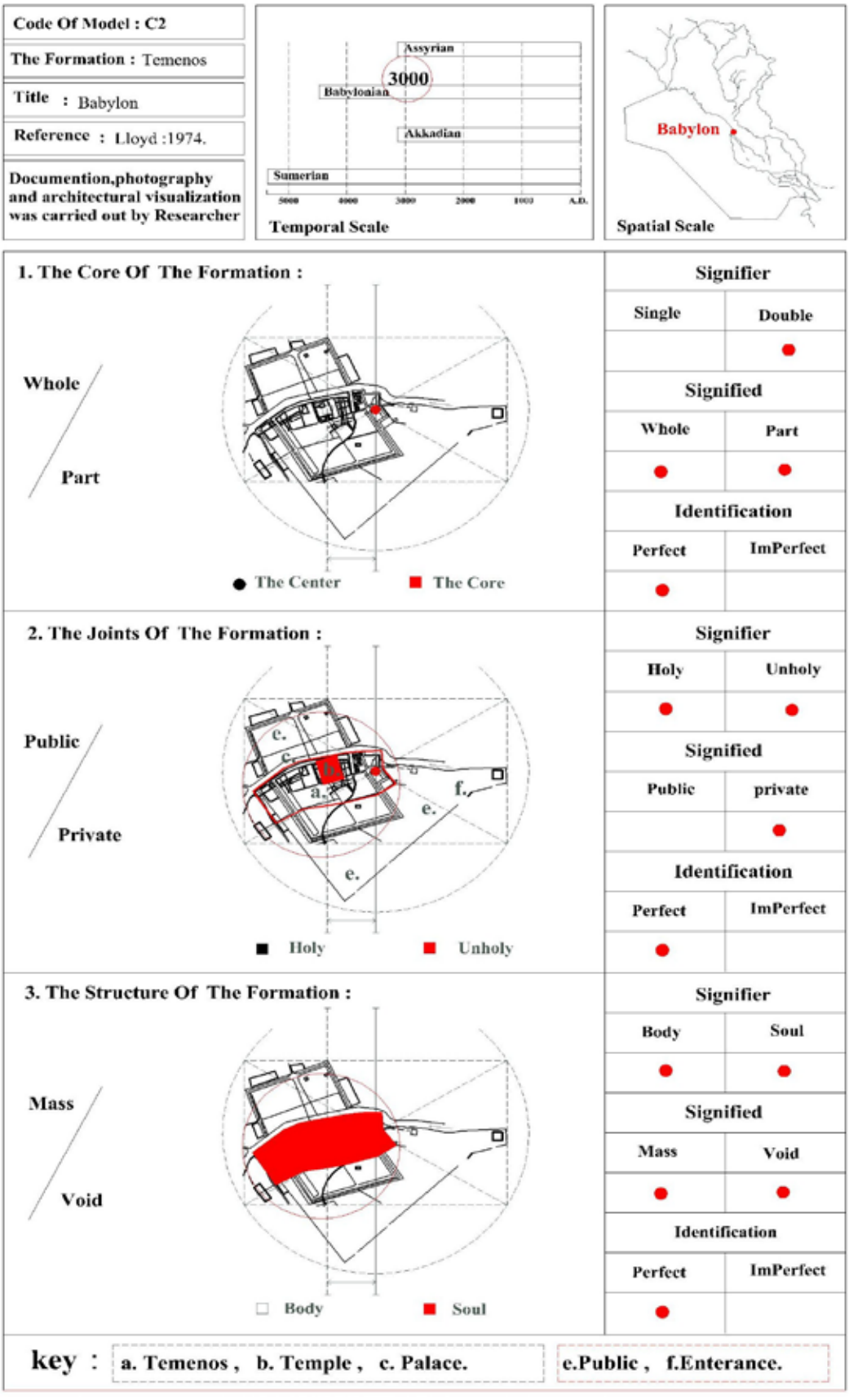
Architectural product	Code	Titel	Place	Time B.C	Culture
Temenos	C3	Dursharrukin	Nineveh	1500	Assyrian

(Source: Photographic Documentation by the Author: 2009).

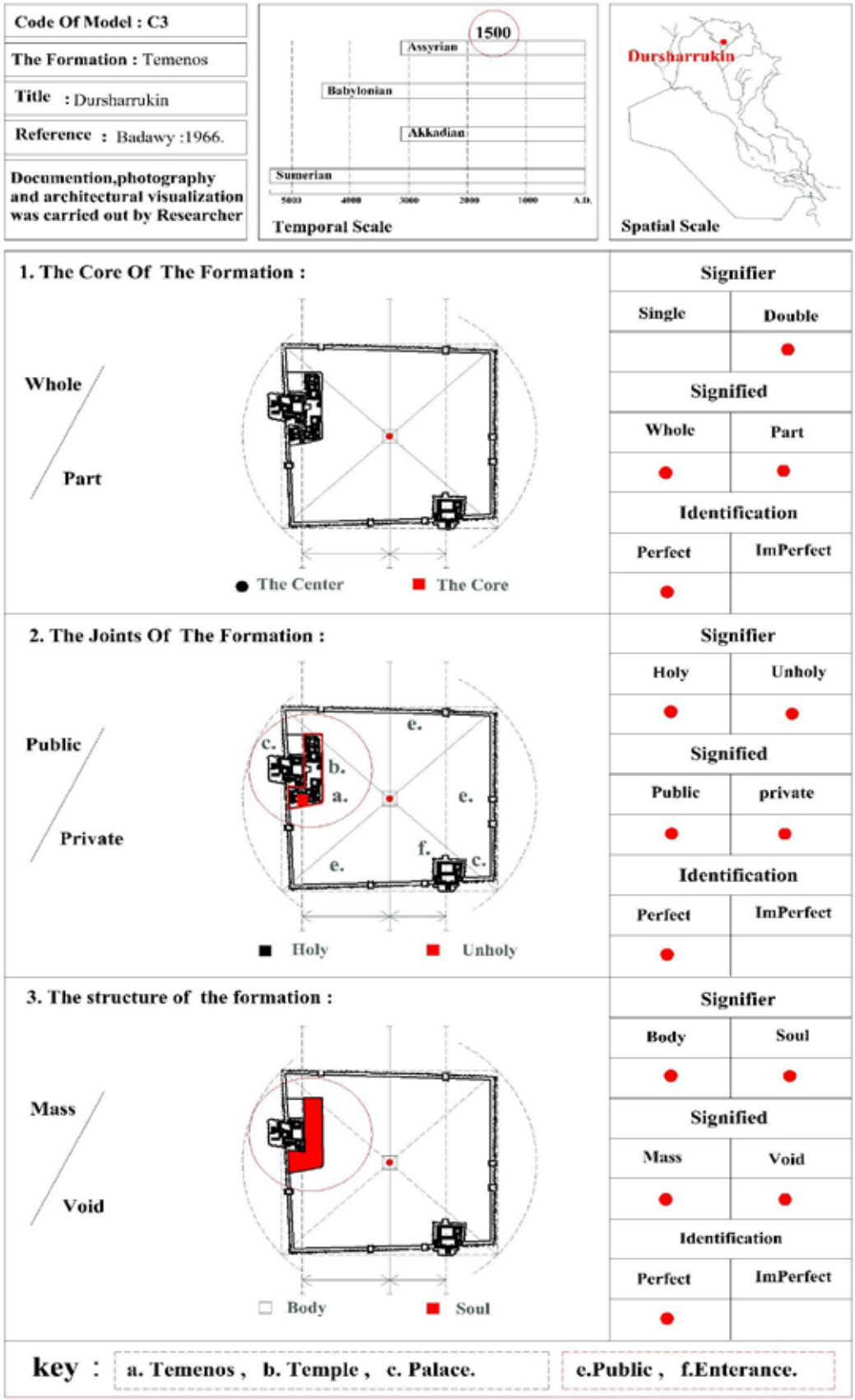
Figures:4.10: Applying the Analysis of the Cultural - Architectural Product:C1.



Figures:4.11: Applying the Analysis of the Cultural - Architectural Product:C2.



Figures:4.12: Applying the Analysis of the Cultural - Architectural Product:C3.



4.6.2.b. Applying the Analysis: The Temple:

Figures:4.13: The Cultural - Architectural Product: T1.

Architectural product	Code	Title	Place	Time B.C	Culture
Temple	T1	Abo	Eshnunna	2000	Sumerian

(Source: Photographic Documentation by the Author: 2010).

Figures:4.14: The Cultural - Architectural Product: T6.

Architectural product	Code	Title	Place	Time B.C	Culture
Temple	T6	Inanna	Uruk	1500	Babylonian

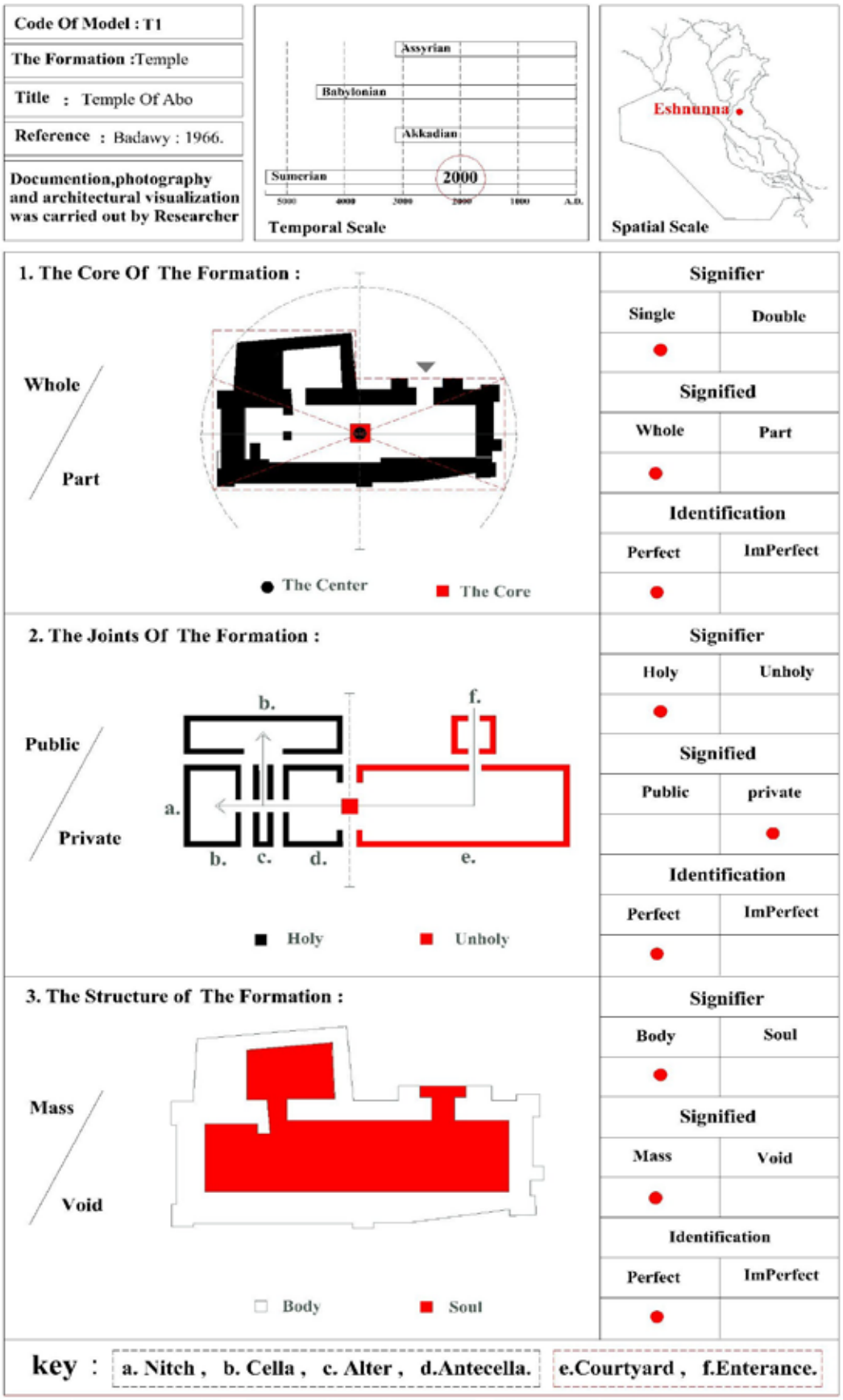
(Source: Photographic Documentation by the Author: 2010).

Figures:4.15: The Cultural - Architectural Product: T9.

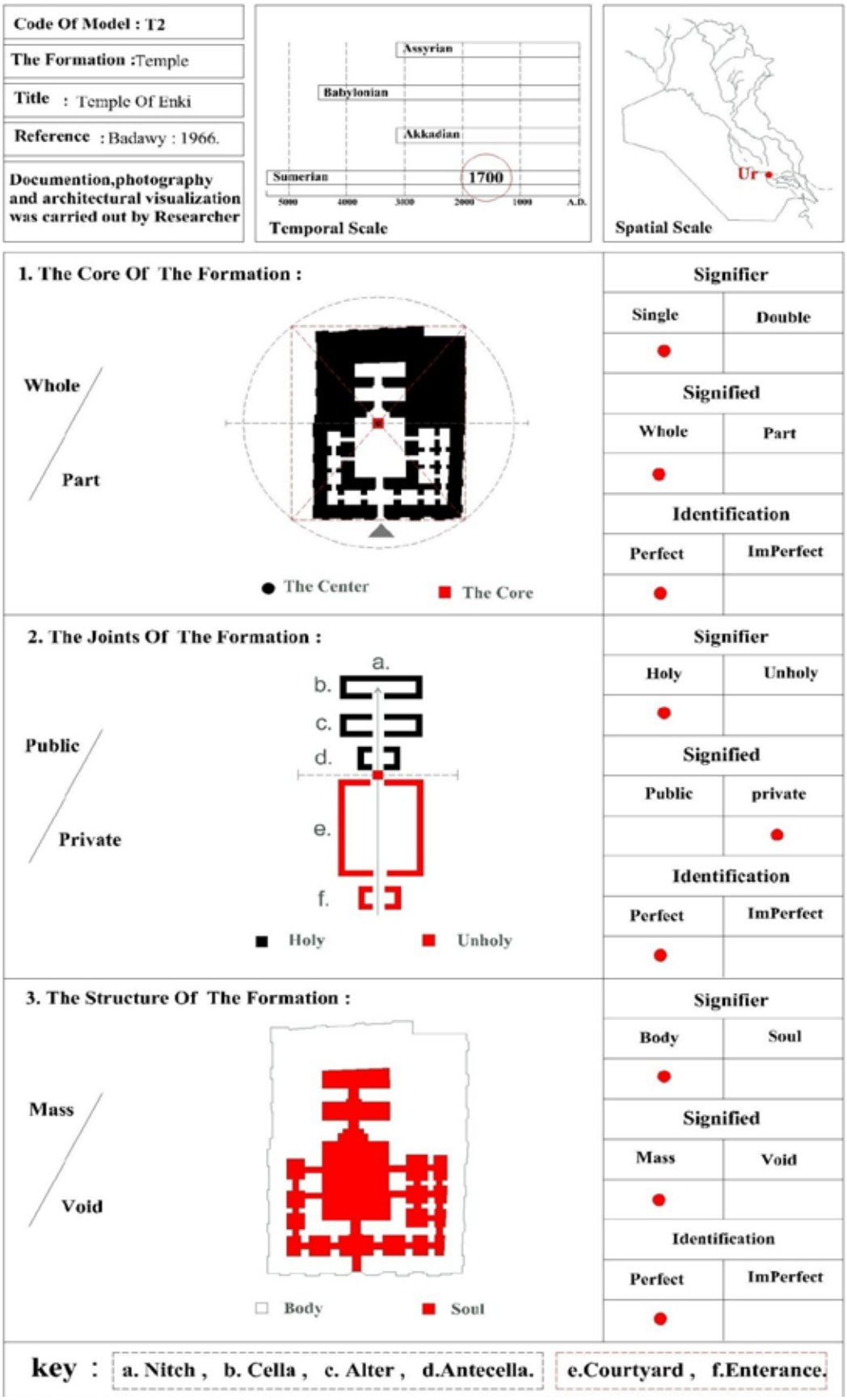
Architectural product	Code	Titel	Place	Time B.C	Culture
Temple	T9	Sin-Shamsh	Assyria	1500	Assyrian

(Source: Photographic Documentation by the Author: 2009).

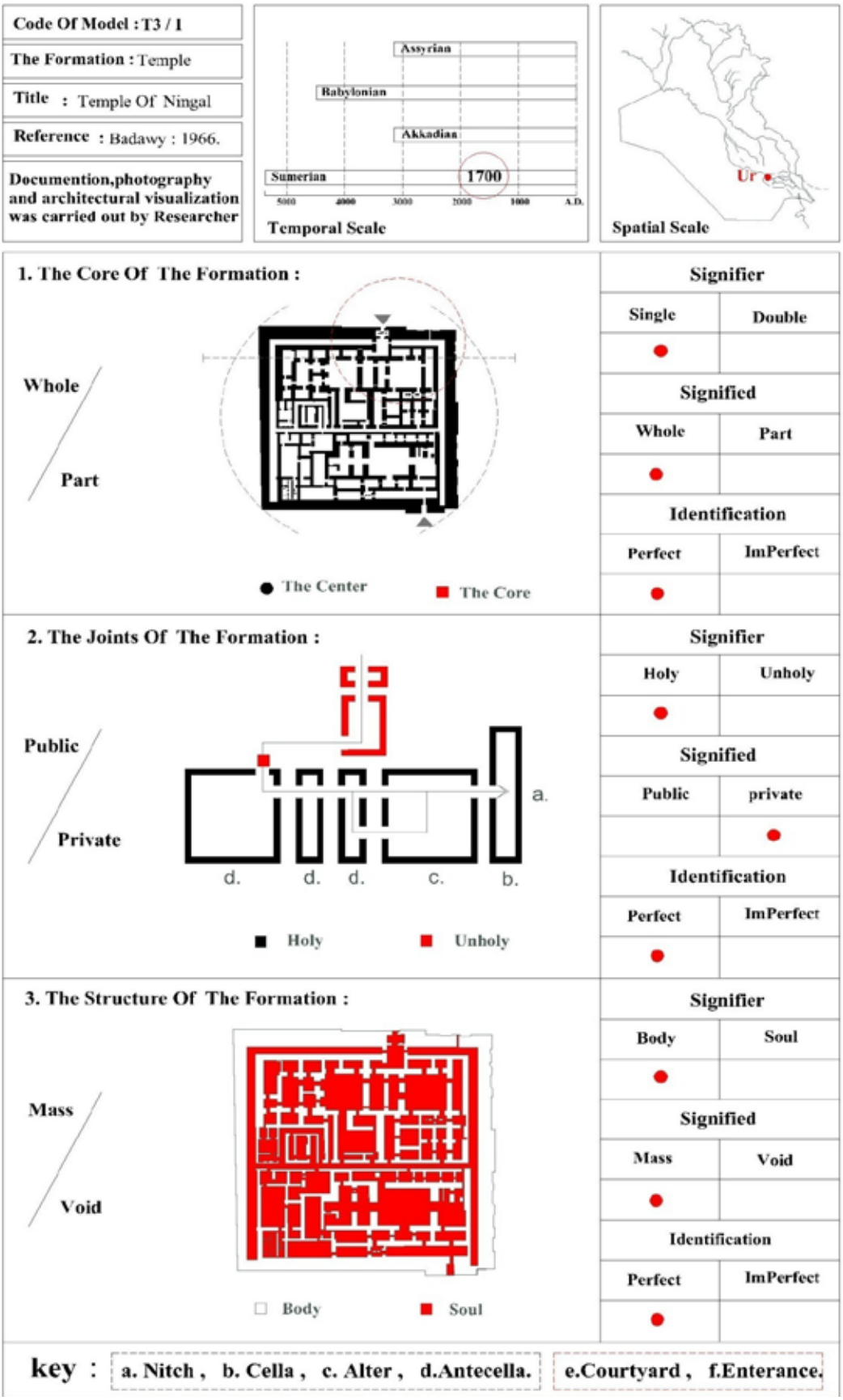
Figures:4.16: Applying the Analysis of the Cultural - Architectural Product:T1.



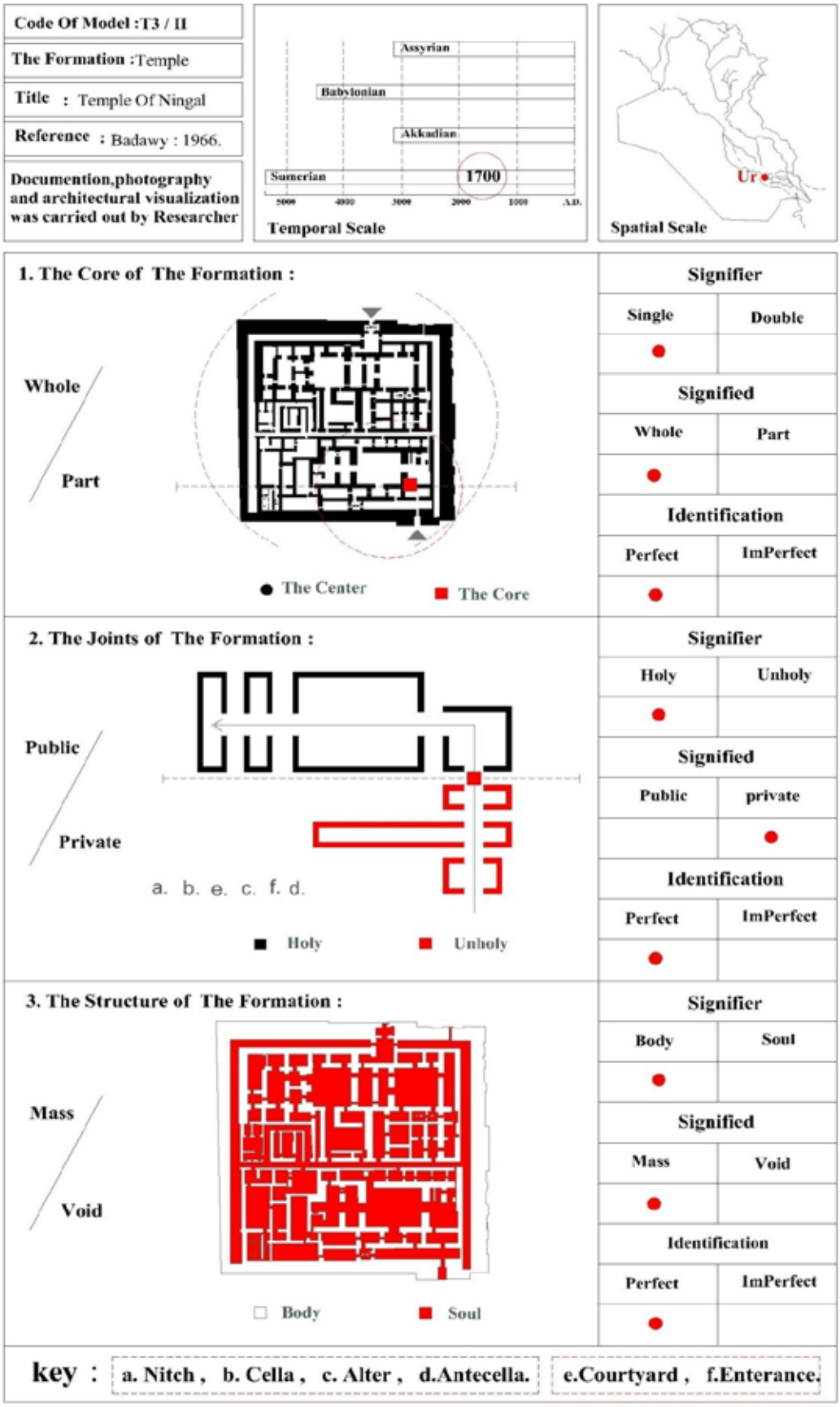
Figures:4.17: Applying the Analysis of the Cultural - Architectural Product:T2.



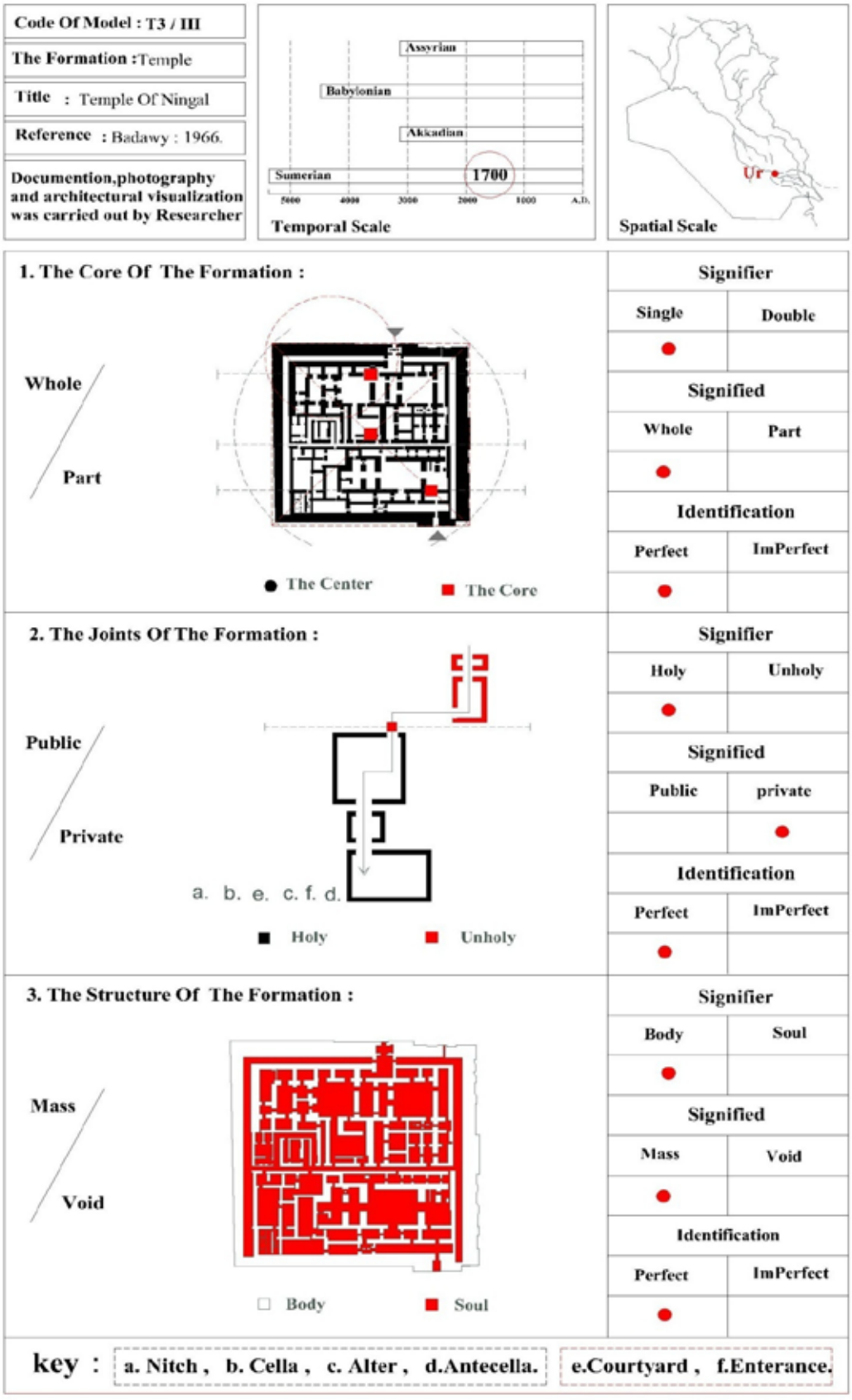
Figures:4.18: Applying the Analysis of the Cultural - Architectural Product: T3 /I.



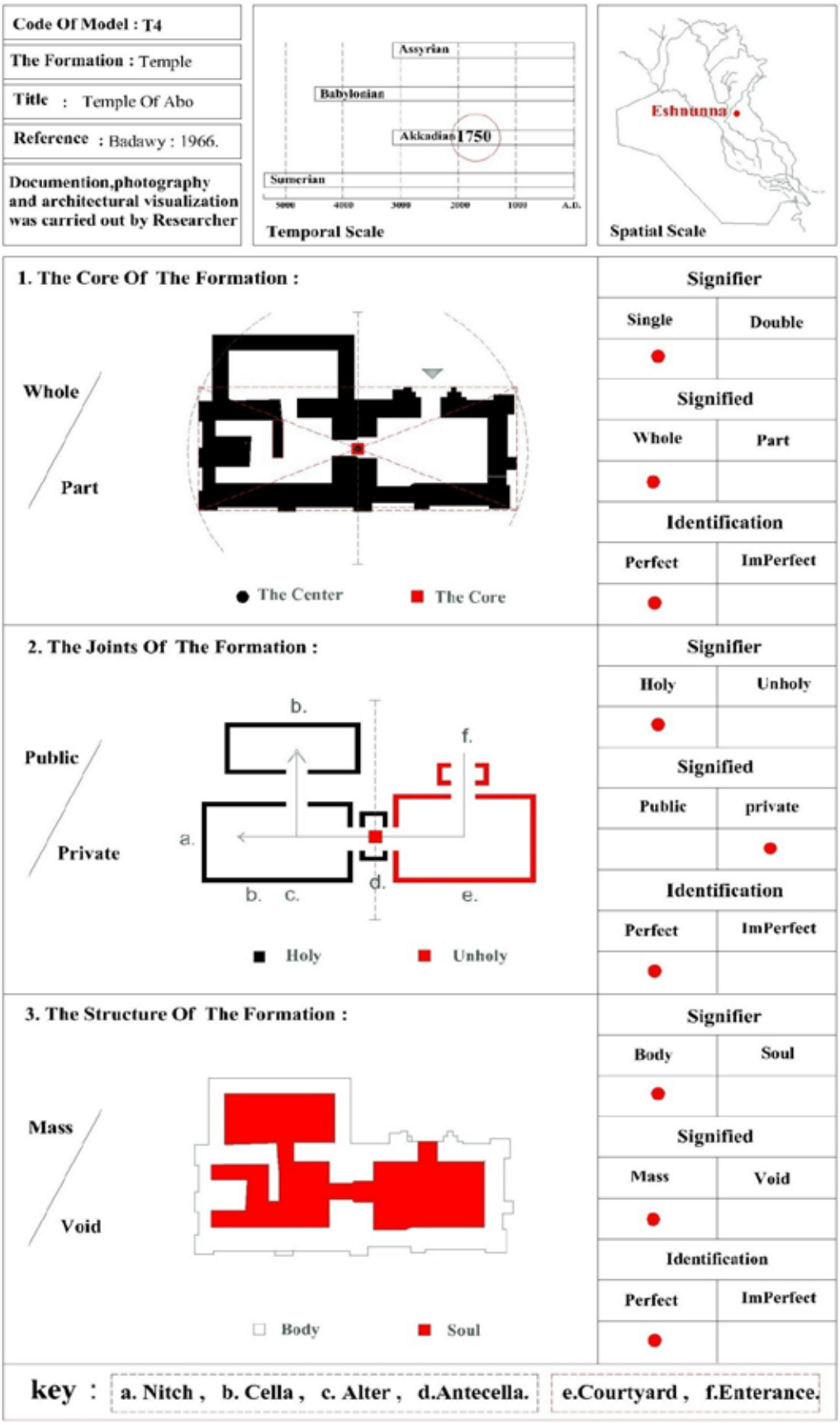
Figures:4.19: Applying the Analysis of the Cultural - Architectural Product: T3 /II.



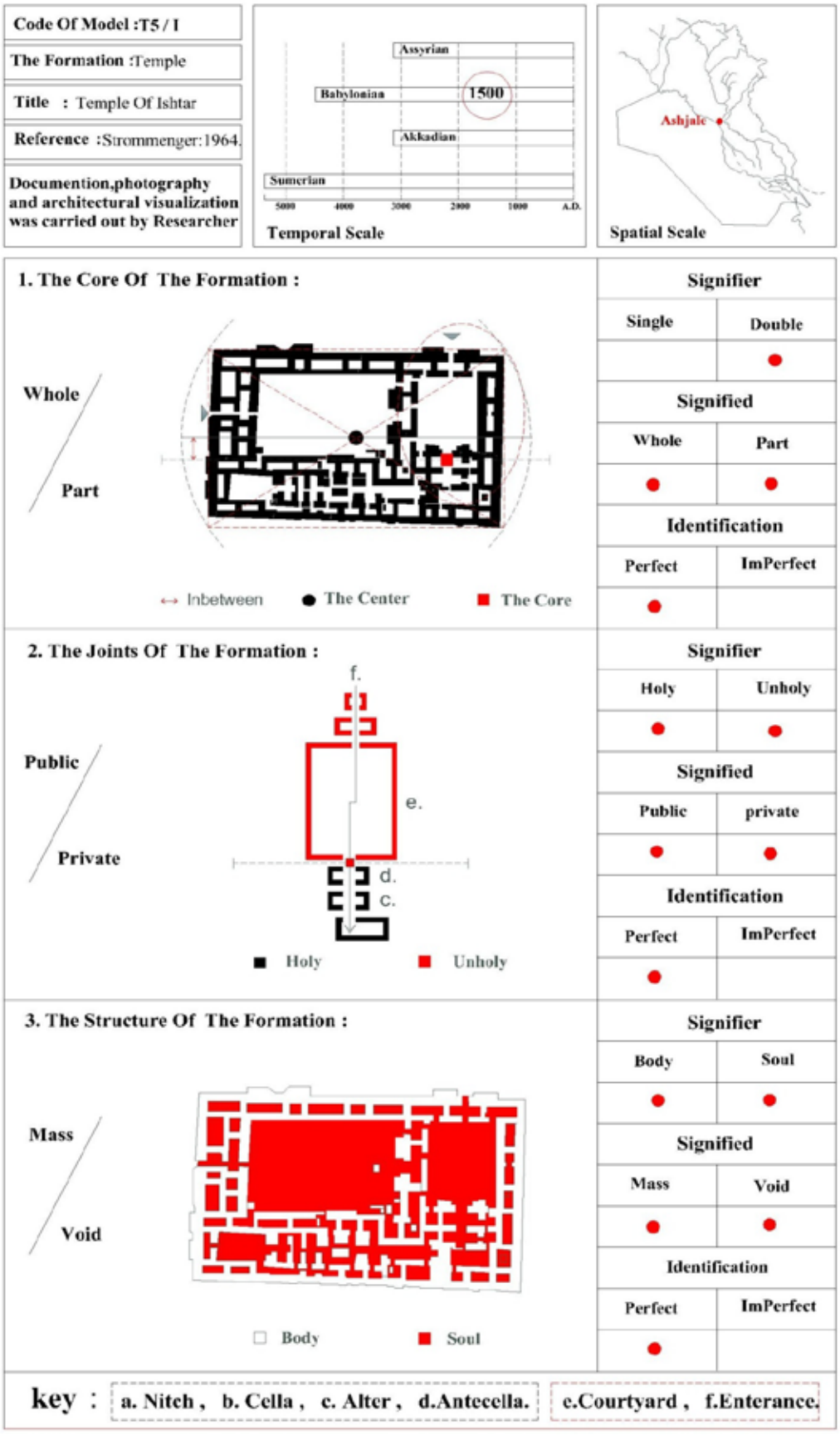
Figures:4.20: Applying the Analysis of the Cultural - Architectural Product: T3 /III.



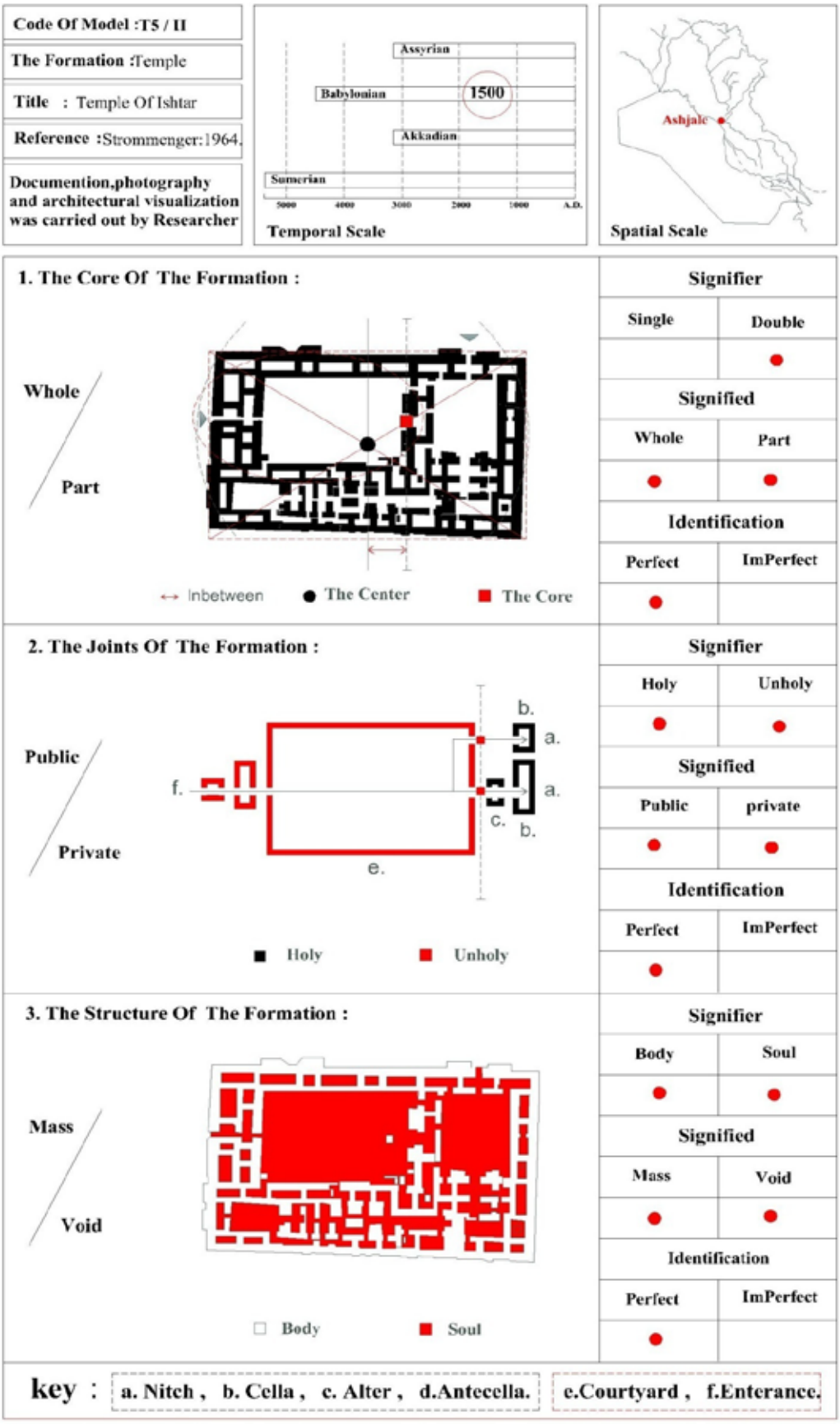
Figures:4.21: Applying the Analysis of the Cultural - Architectural Product:T4.



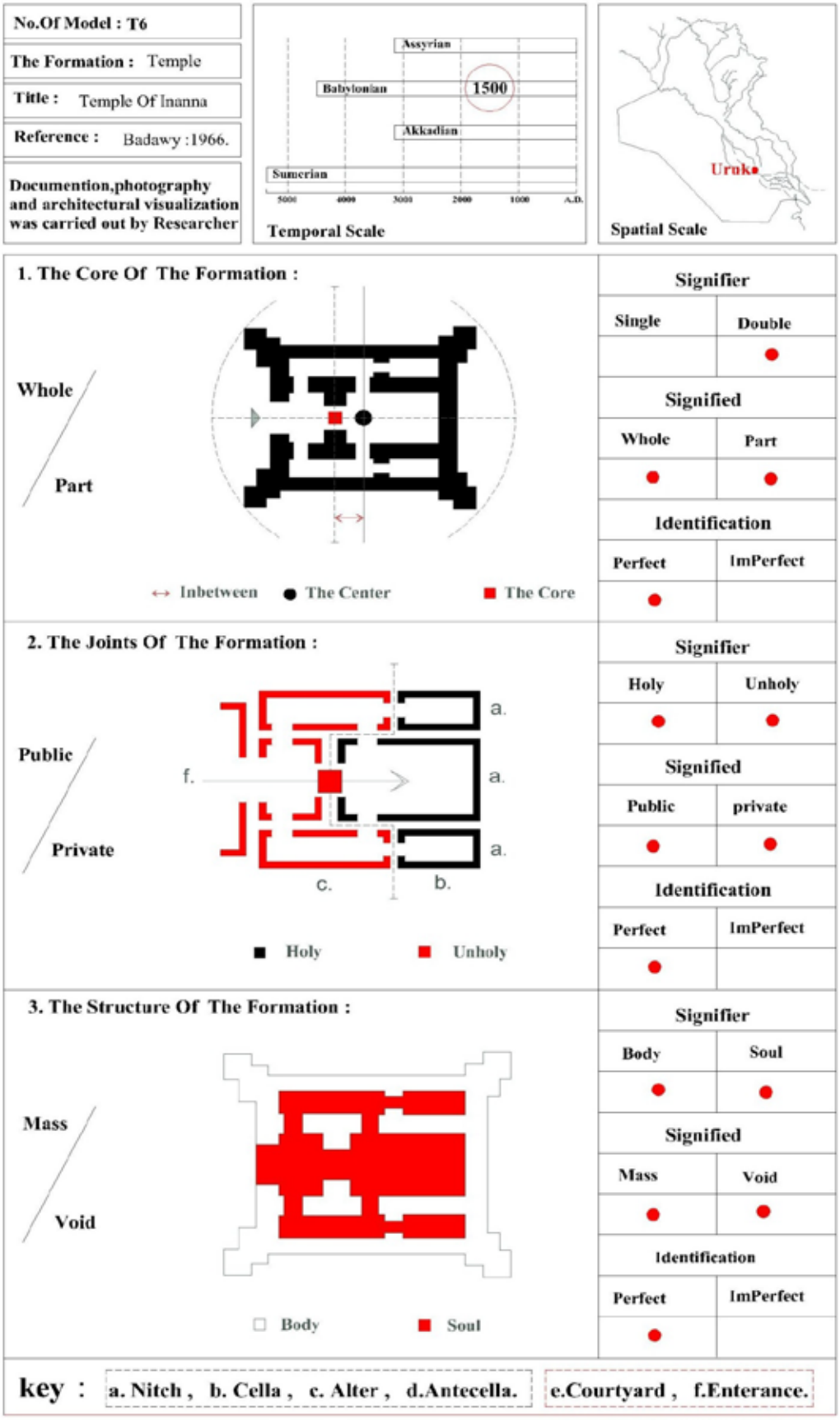
Figures:2.22: Applying the Analysis of the Cultural - Architectural Product: T5 /I.



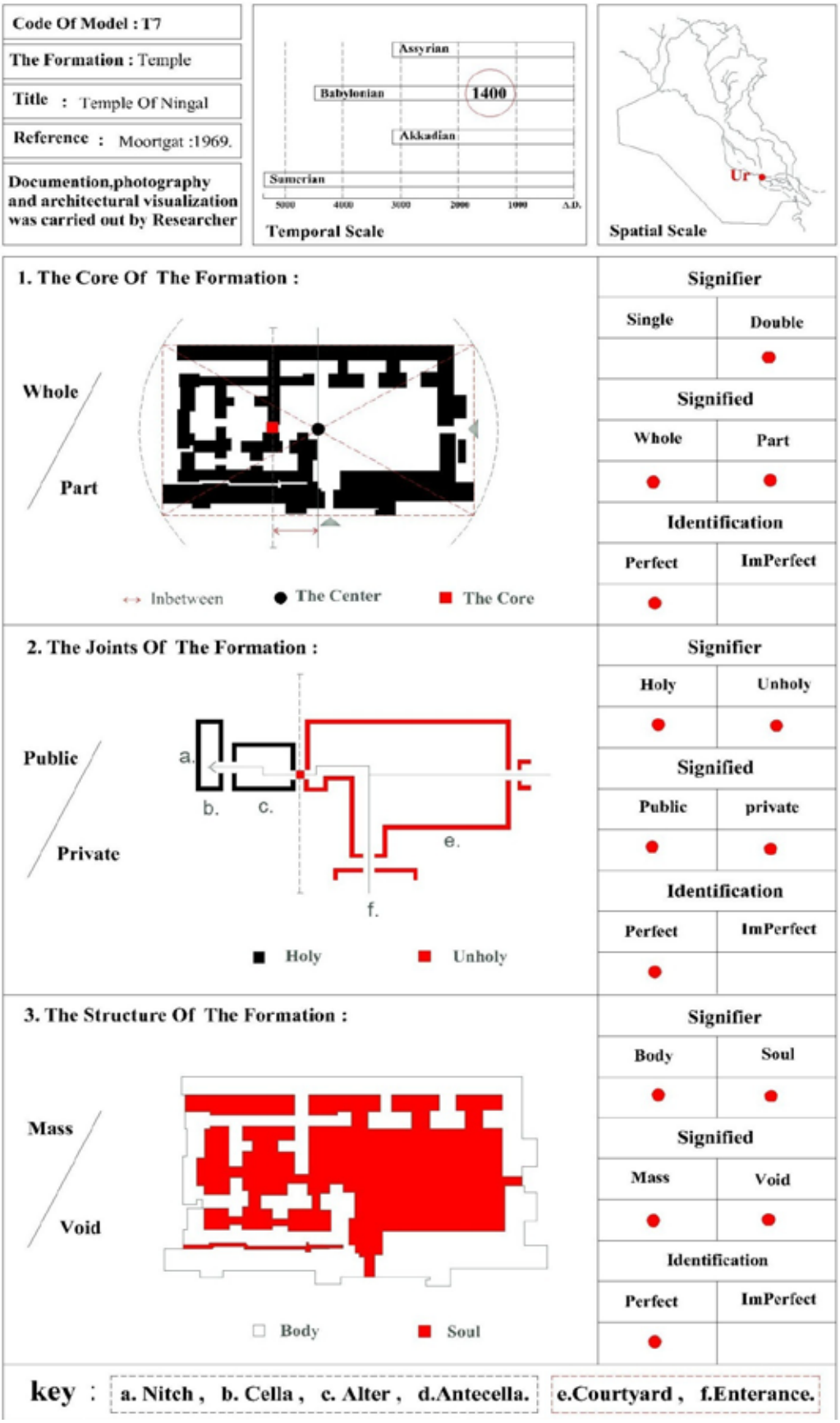
Figures:4.23: Applying the Analysis of the Cultural - Architectural Product: T5/II.



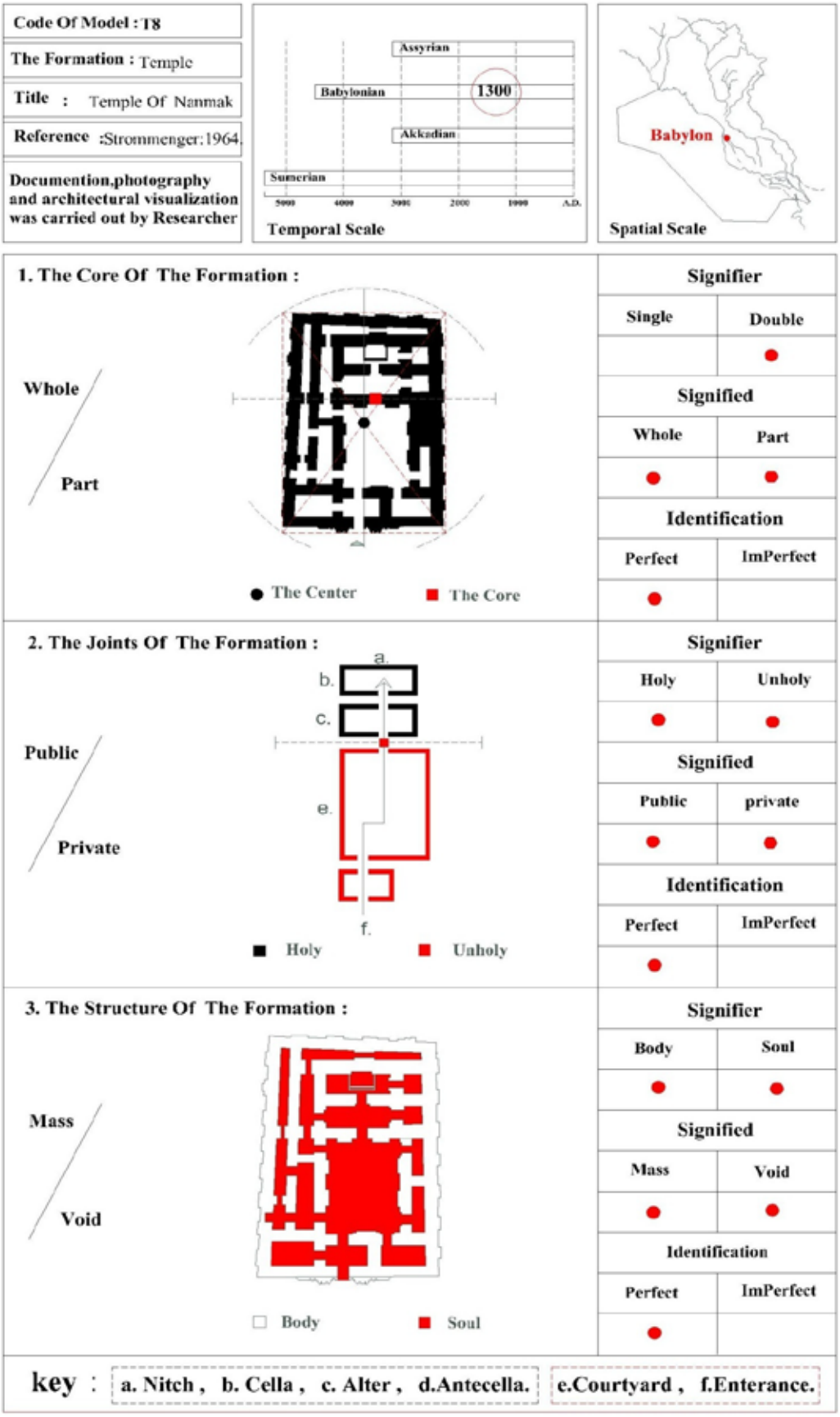
Figures:4.24: Applying the Analysis of the Cultural - Architectural Product:T6.



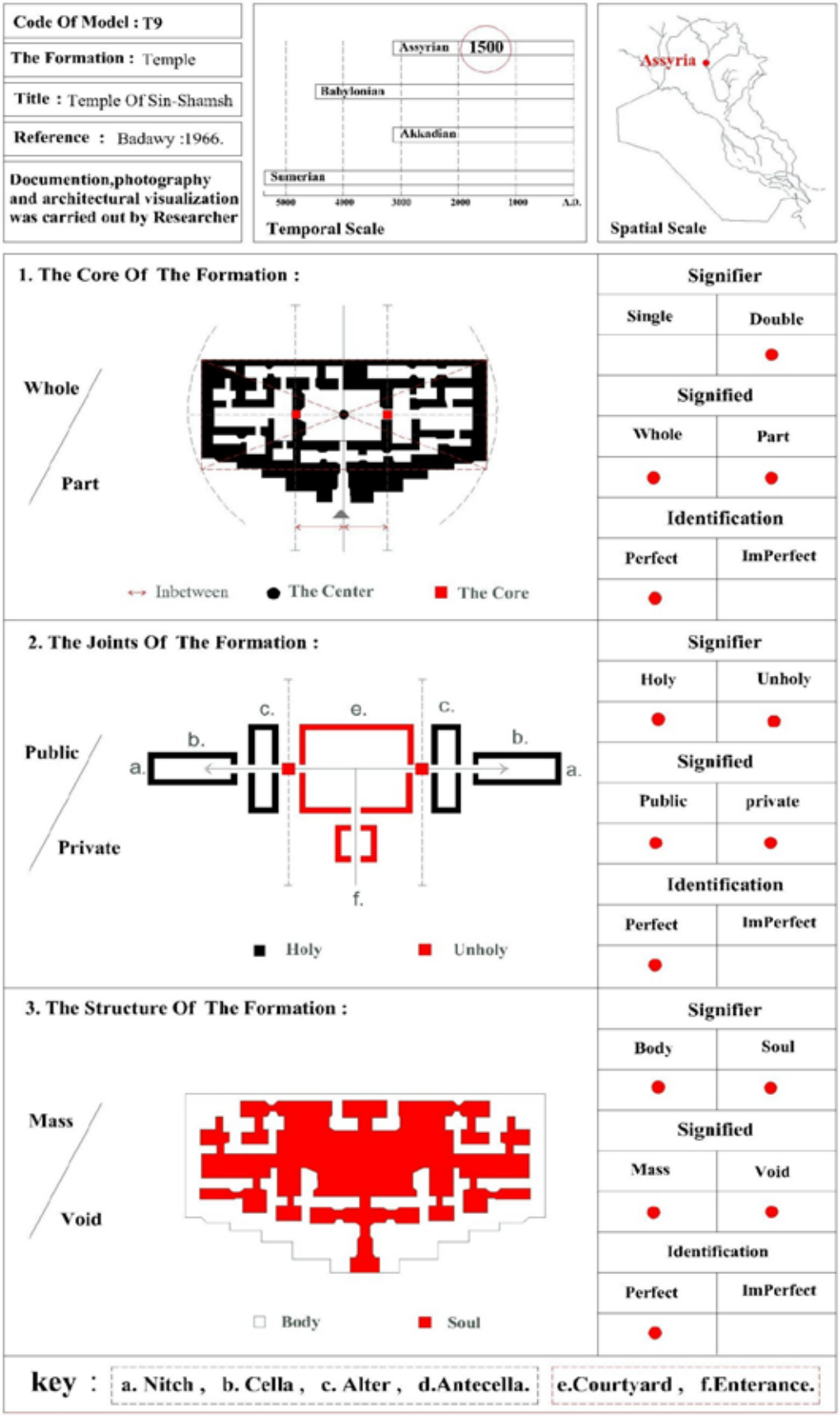
Figures:4.25: Applying the Analysis of the Cultural - Architectural Product:T7.



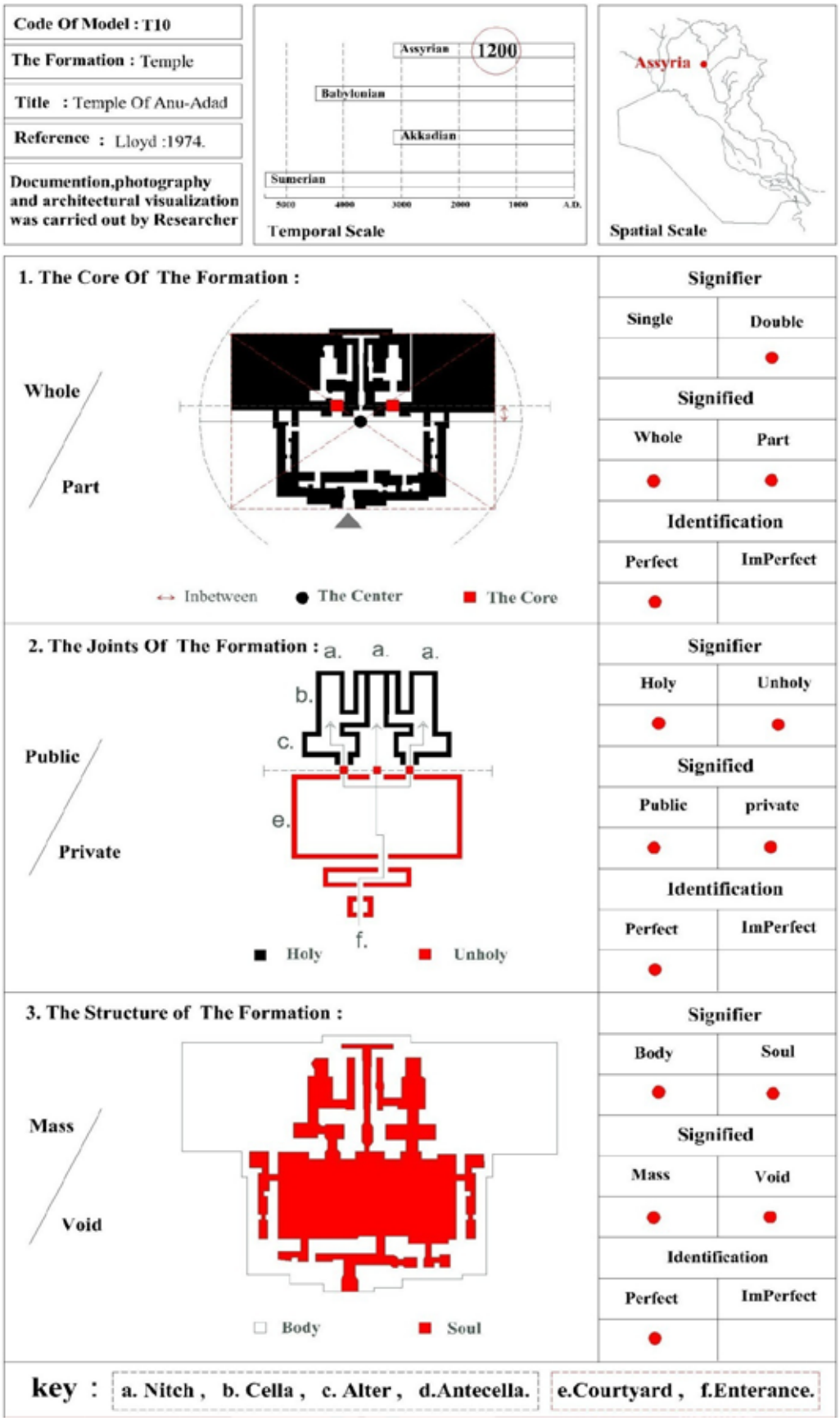
Figures:4.26: Applying the Analysis of the Cultural - Architectural Product:T8.



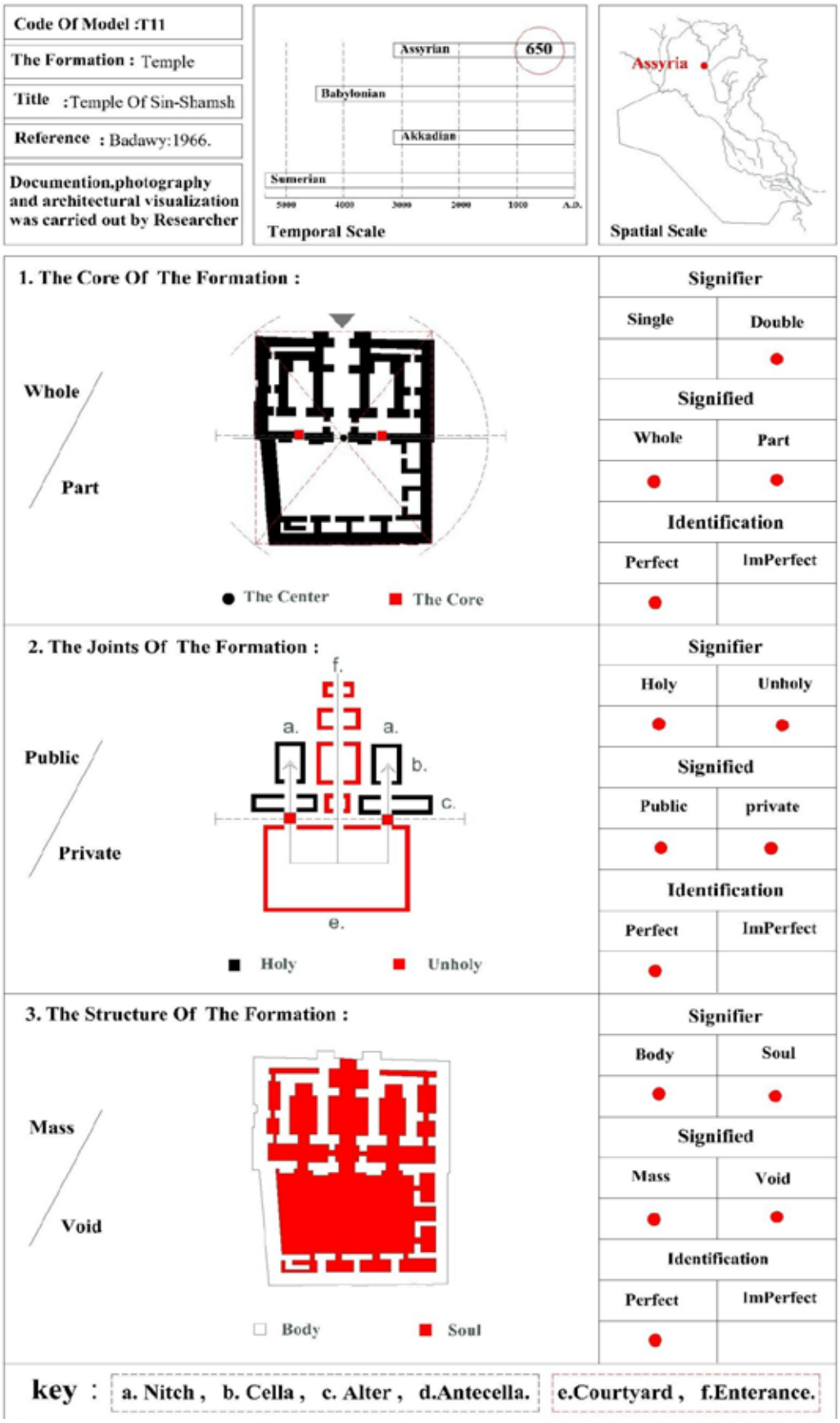
Figures:4.27: Applying the Analysis of the Cultural - Architectural Product:T9.



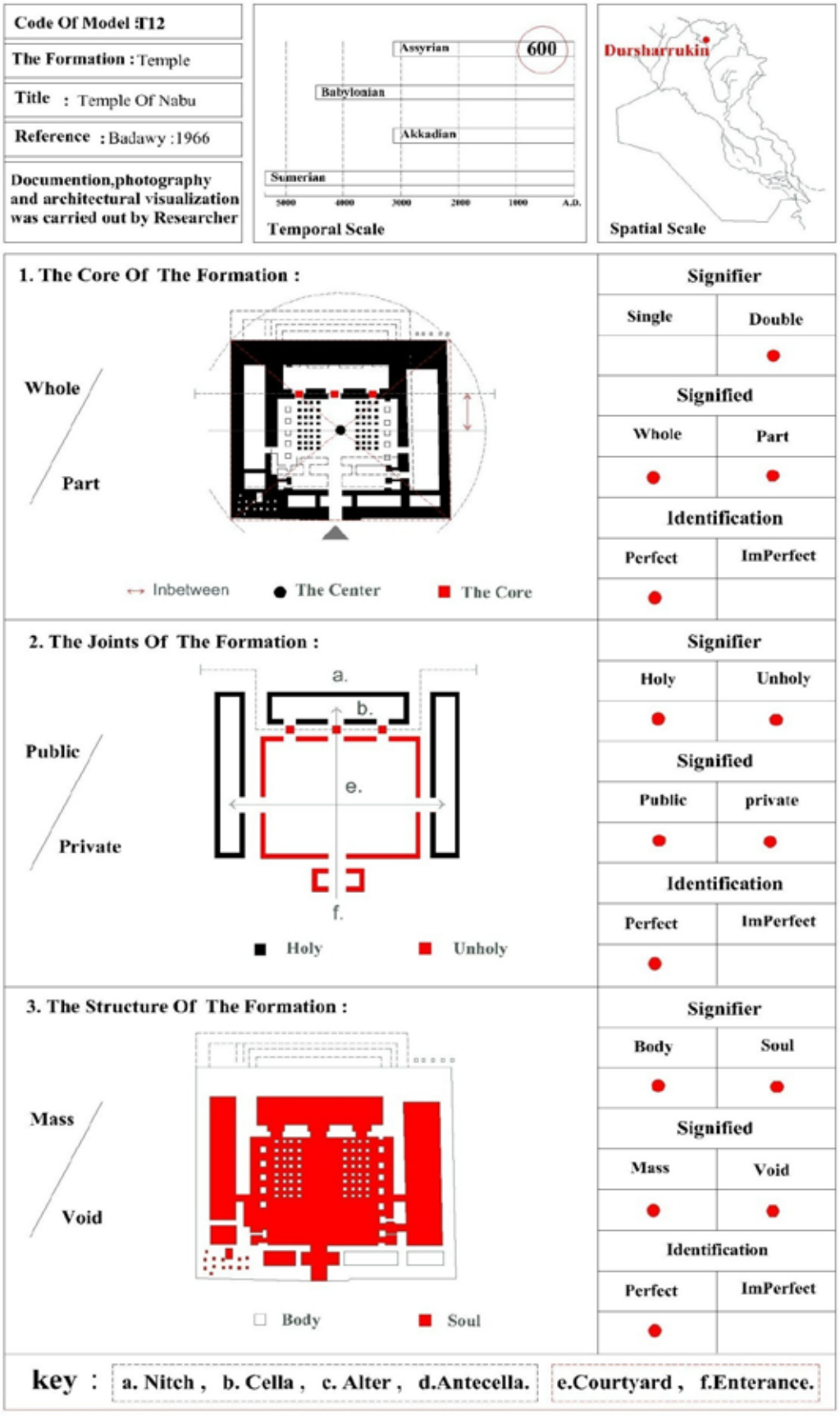
Figures:4.28: Applying the Analysis of the Cultural - Architectural Product: T10.



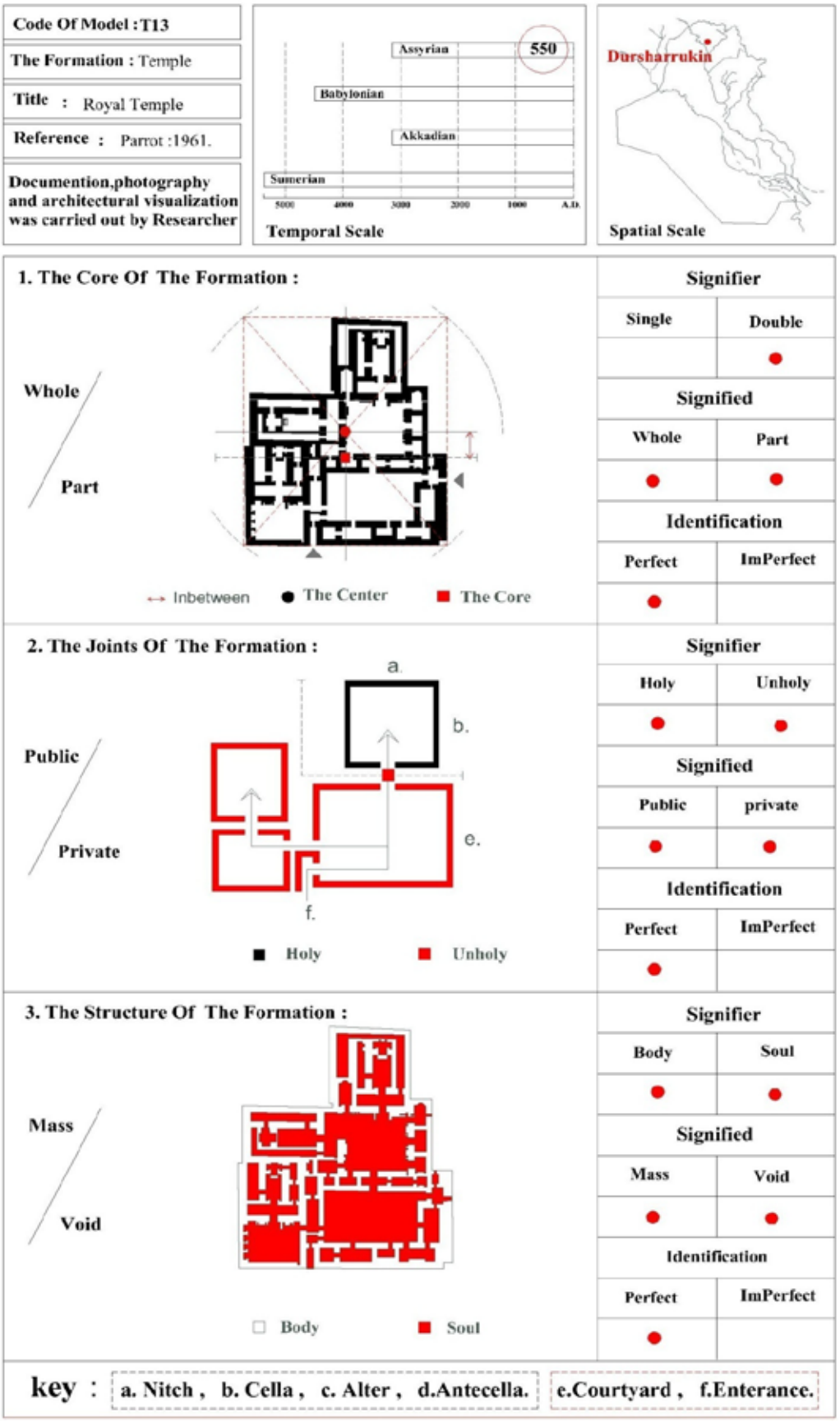
Figures:4.29: Applying the Analysis of the Cultural - Architectural Product: T11.



Figures:4.30: Applying the Analysis of the Cultural - Architectural Product: T12.



Figures:4.31: Applying the Analysis of the Cultural - Architectural Product: T13.



4.6.2.c. Applying the Analysis: The Palace

Figures:4.32: The Cultural - Architectural Product: P1.

Architectural product	Code	Title	Place	Time B.C	Culture
Palace	P1	Mislim	Kish	2600	Sumerian

(Source: Photographic Documentation by the Author: 2009).

Figures:4.33: The Cultural - Architectural Product: P3/I&II.

Architectural product	Code	Title	Place	Time B.C	Culture
Palace	P3	The Ruler	Eshnunna	2000	Babylonian

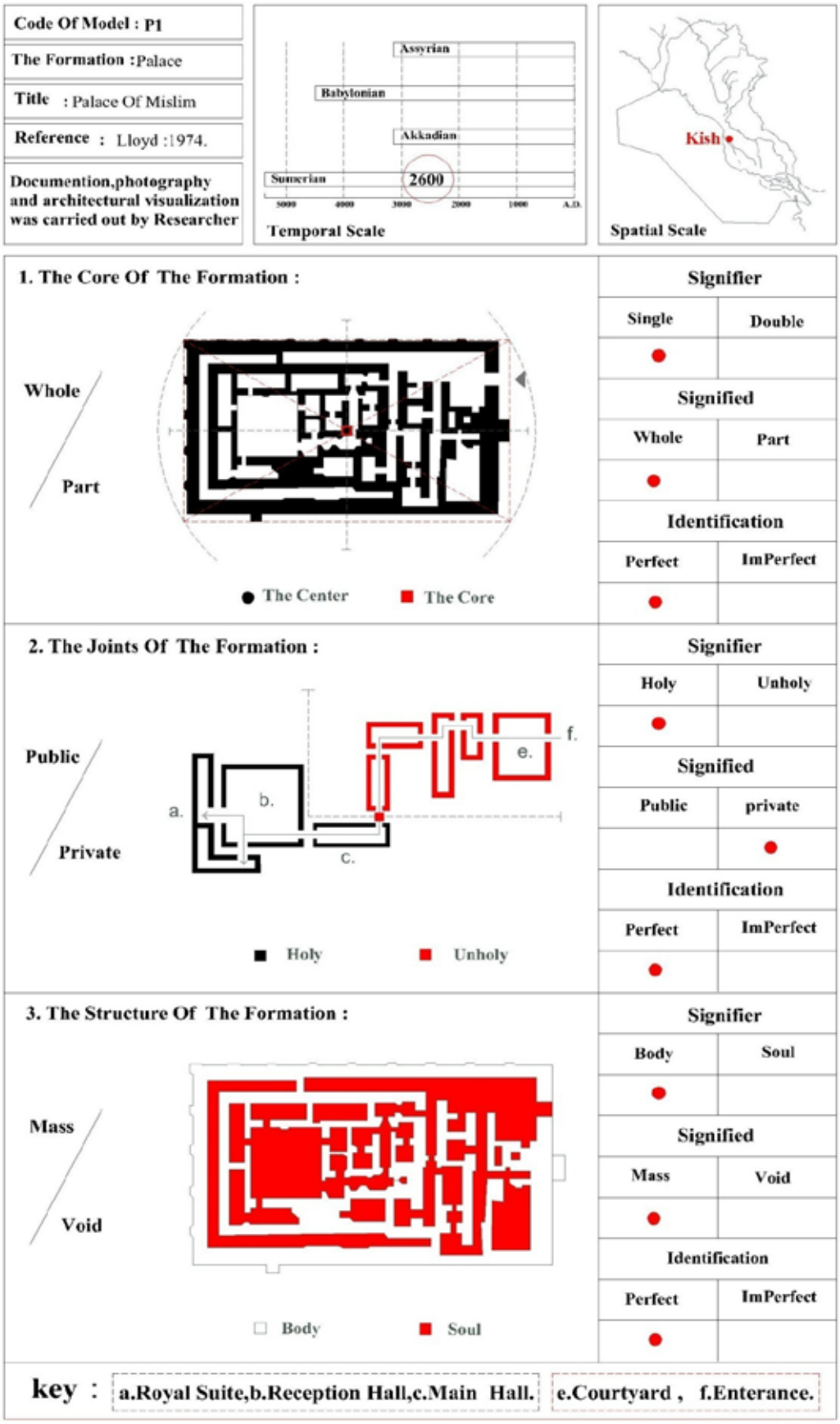
(Source: Photographic Documentation by the Author: 2009).

Figures:4.34: The Cultural - Architectural Product: P5.

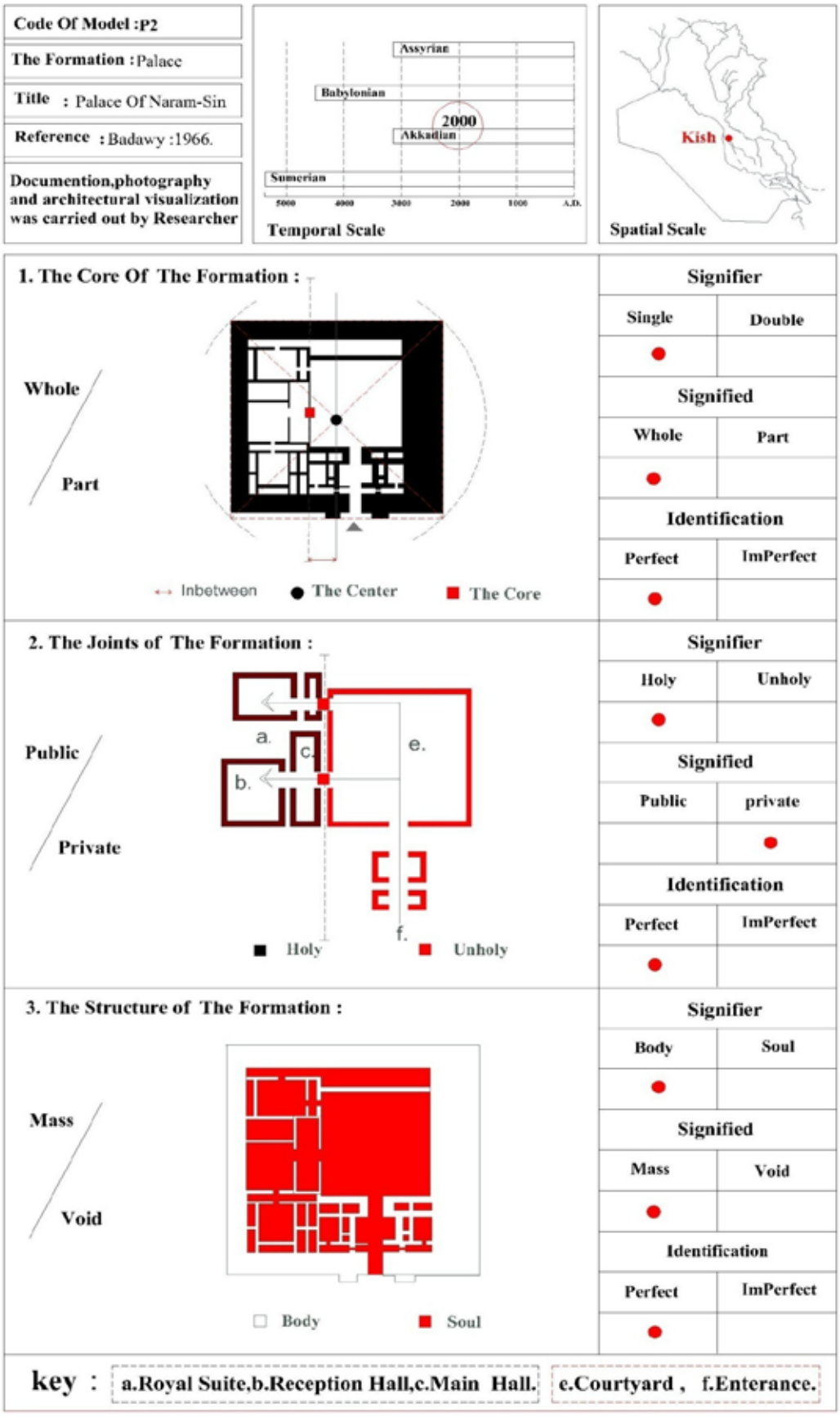
Architectural Product	Code	Title	Place	Time B.C	Culture
Palace	P5	Sargon II	Dursharrukin	700	Assyrian

(Source: Photographic Documentation by the Author: 2009).

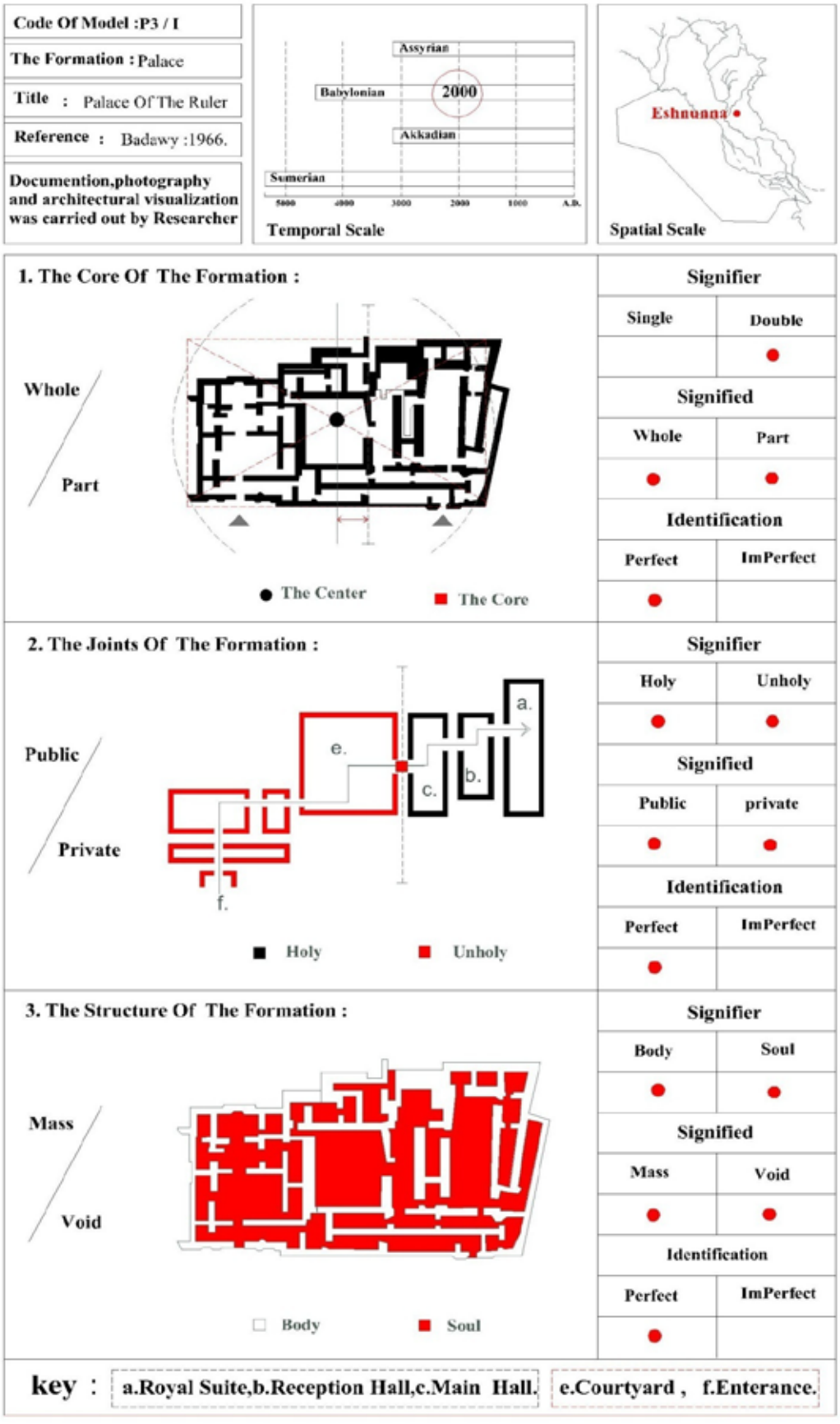
Figures:4.35: Applying the Analysis of the Cultural - Architectural Product:P1.



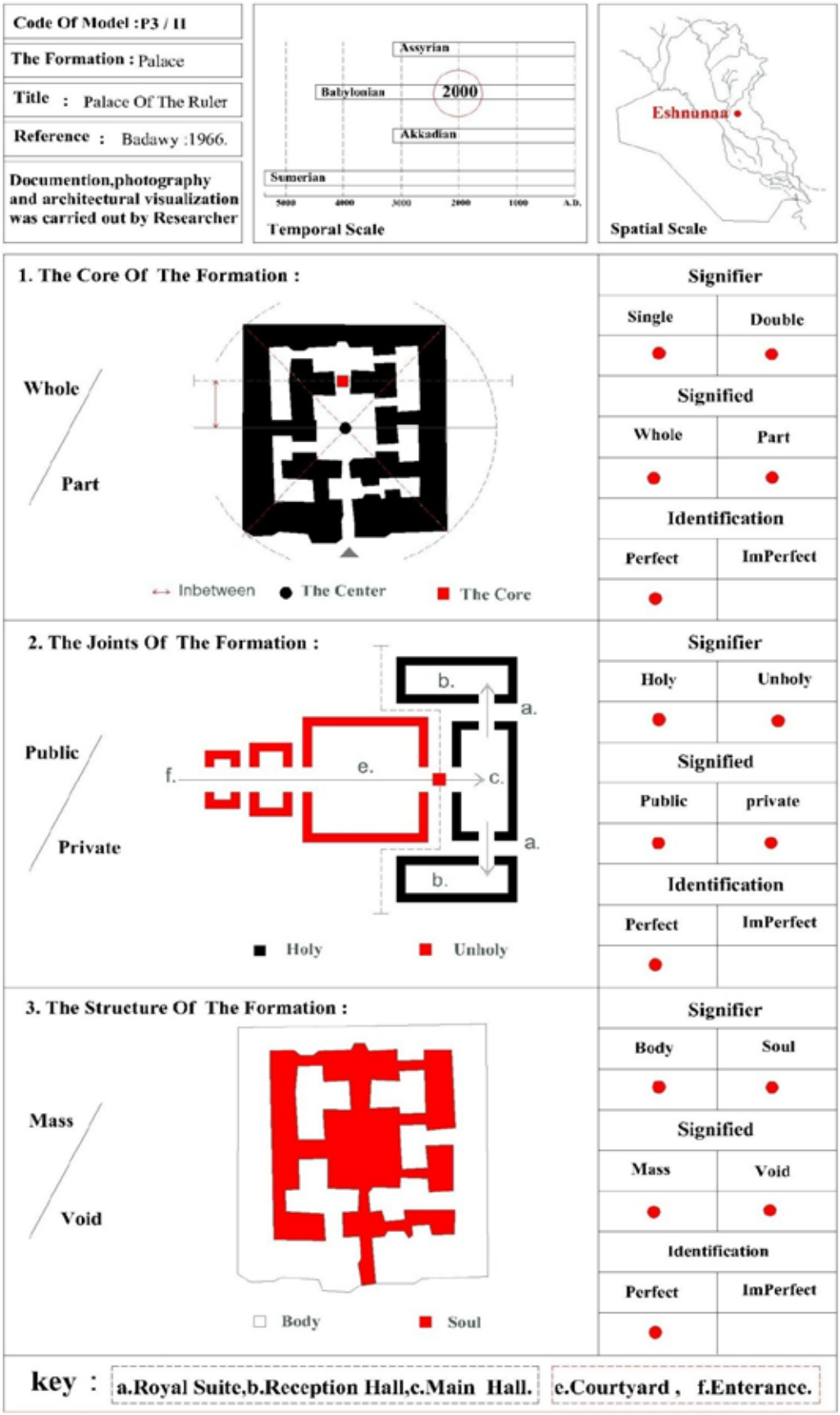
Figures:4.36: Applying the Analysis of the Cultural - Architectural Product:P2.



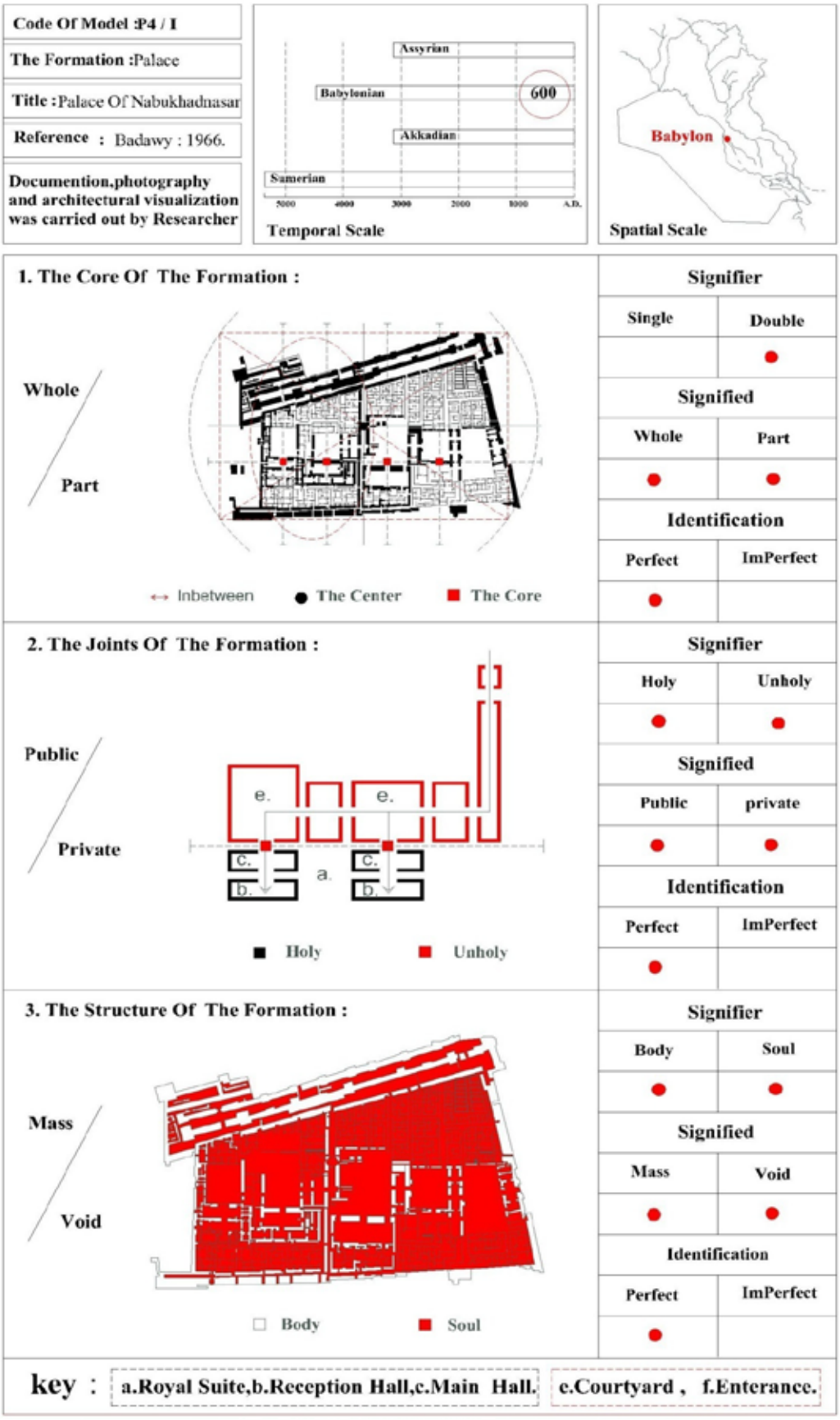
Figures:4.37: Applying the Analysis of the Cultural - Architectural Product: P3/I.



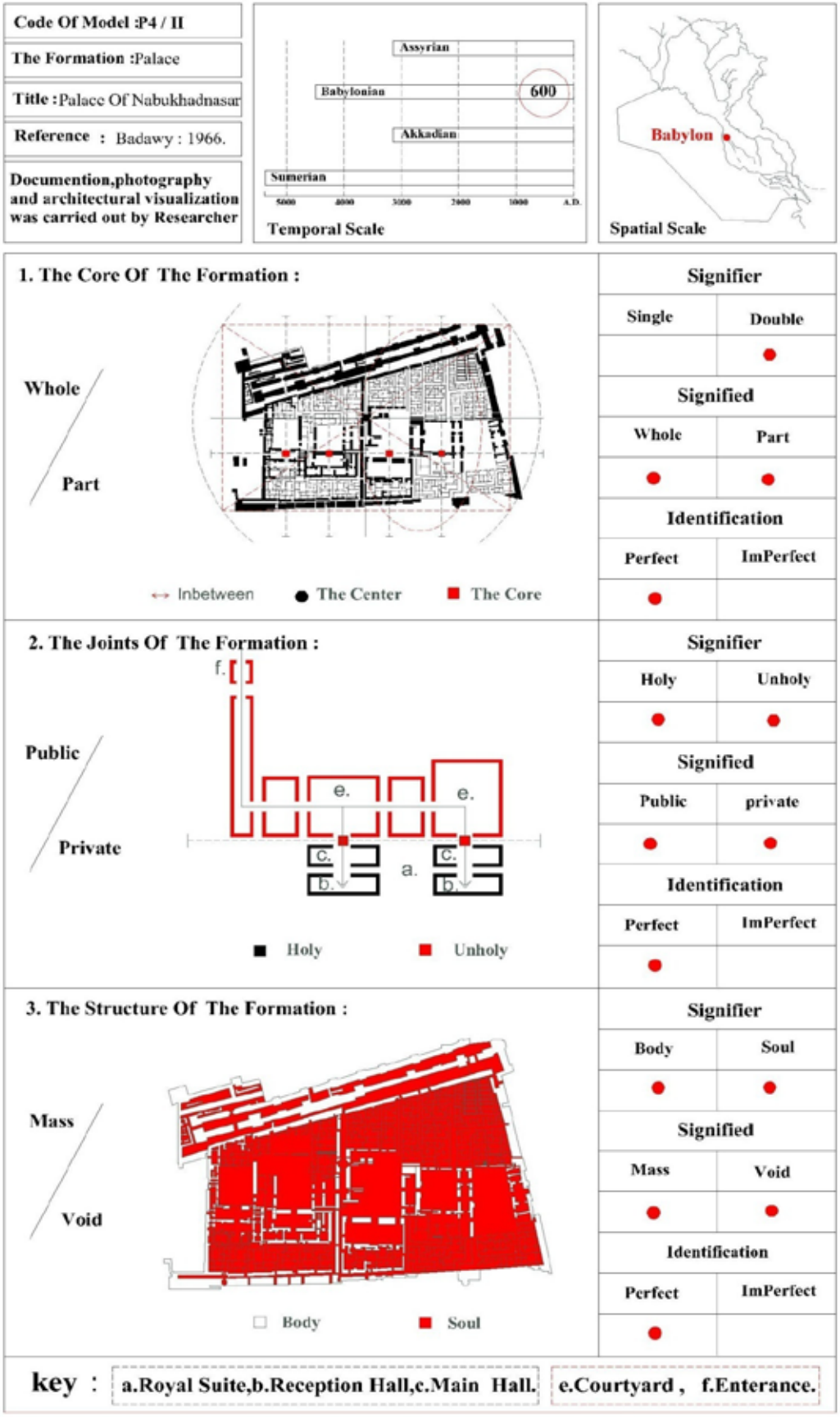
Figures:4.38: Applying the Analysis of the Cultural - Architectural Product: P3/II.



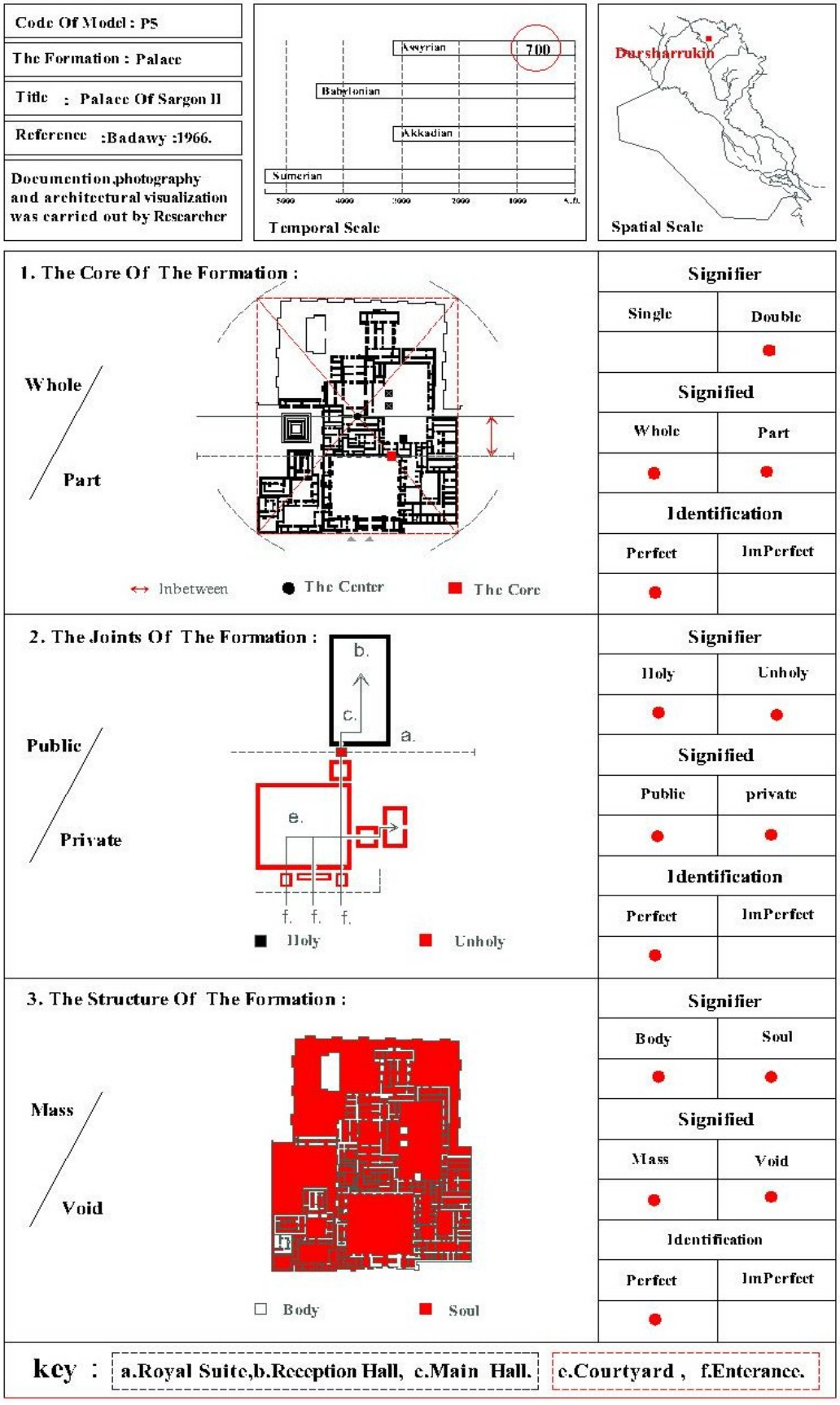
Figures:4.39: Applying the Analysis of the Cultural - Architectural Product: P4/I.



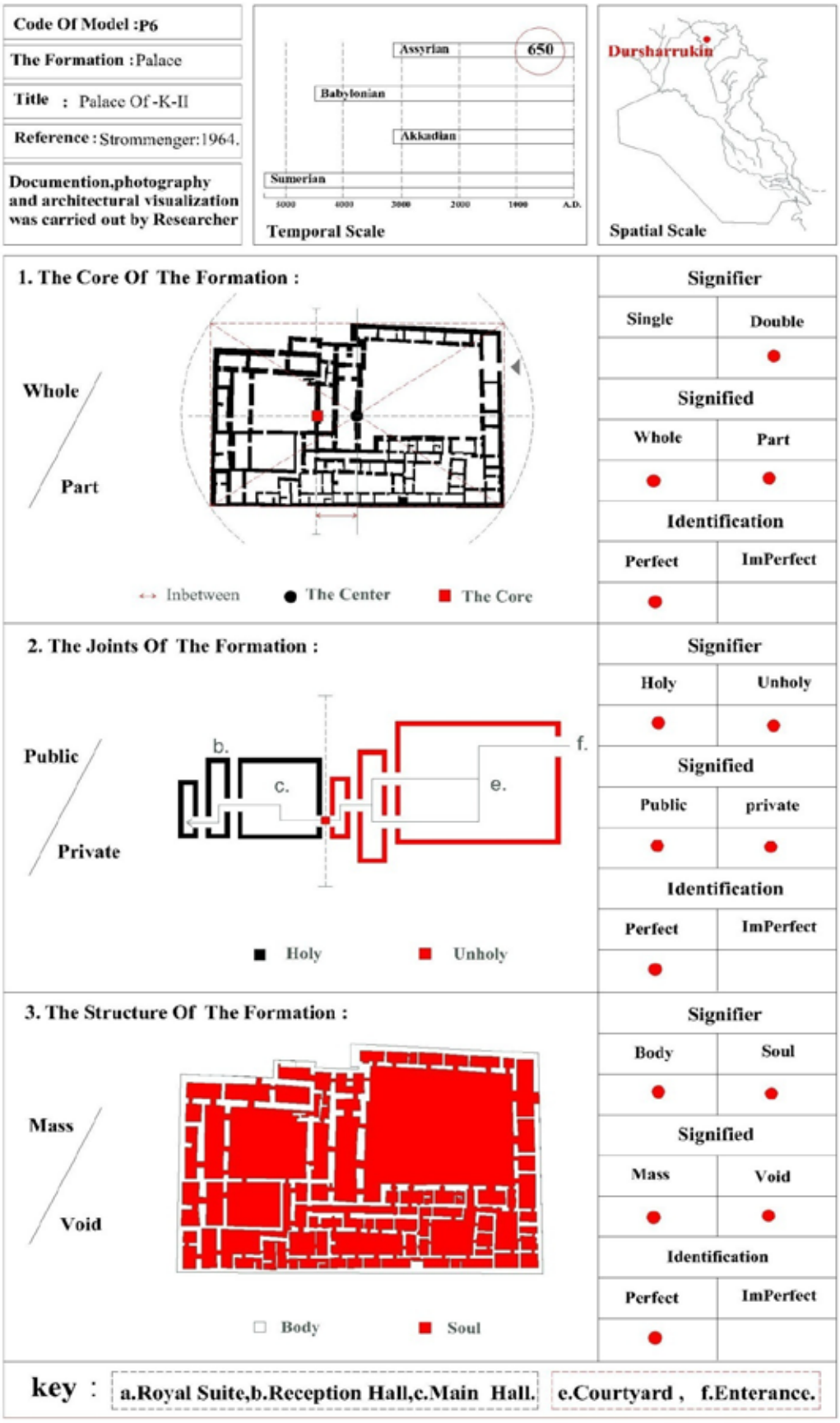
Figures:4.40: Applying the Analysis of the Cultural - Architectural Product: P4/II.



Figures:4.41: Applying the Analysis of the Cultural - Architectural Product:P5.



Figures:4.42: Applying the Analysis of the Cultural - Architectural Product:P6.



4.6.2.d. Applying the Analysis: the Stele, Bas-Relief, and Cylinder Seal

Figures:4.43: The Cultural - Architectural Product: R1.

Architectural product	Code	Title	Place	Time B.C	Culture
Stele	R1	Stele	Kish	2500	Sumerian

(Source: Photographic Documentation by the Author: 2010).

Figures:4.44: The Cultural - Architectural Product: R3.

Architectural product	Code	Title	Place	Time B.C	Culture
Bas-Relief	R3	Bas-Relief	Babylon	870	Babylonian

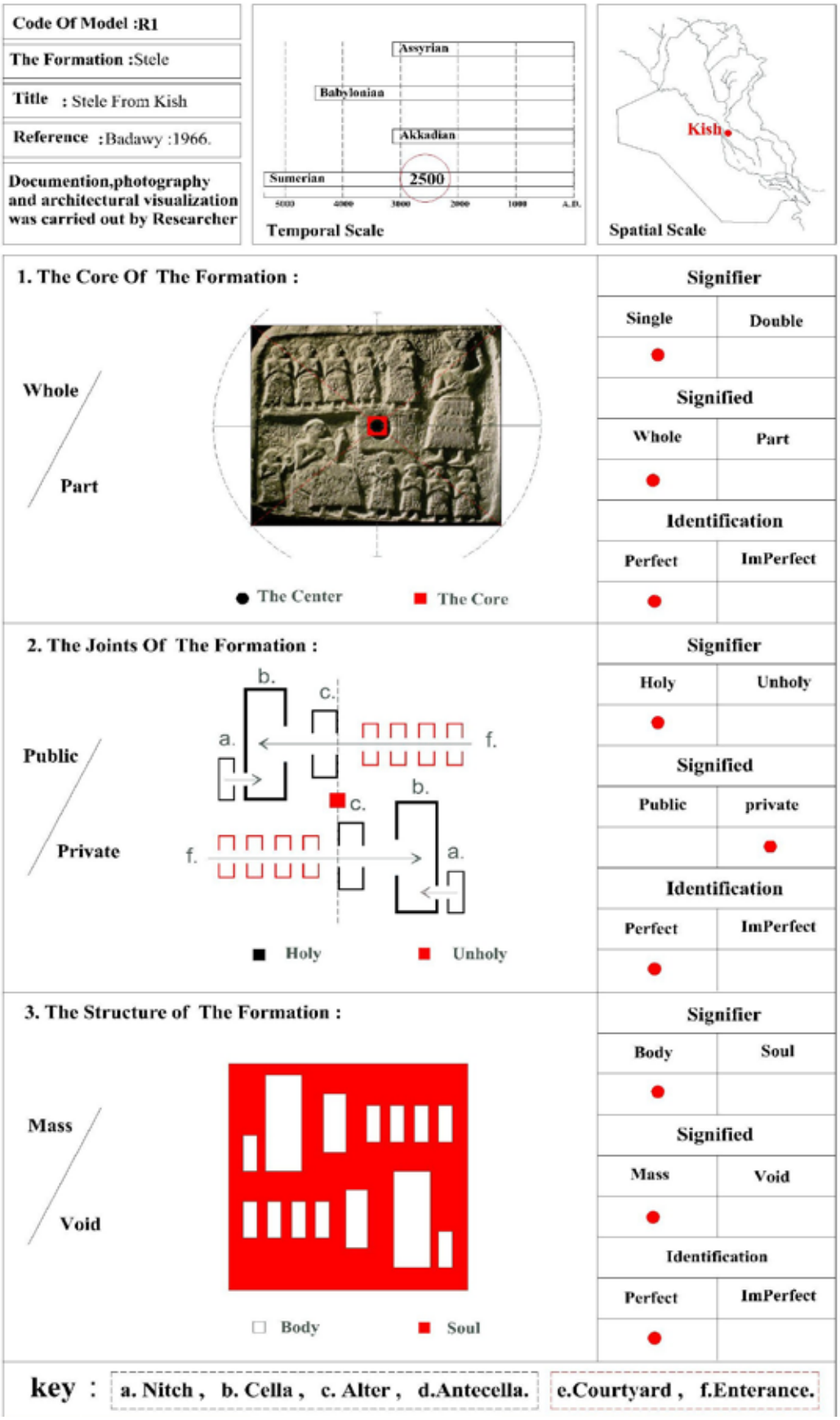
(Source: Photographic Documentation by the Author: 2010).

Figures:4.45: The Cultural - Architectural Product: R5.

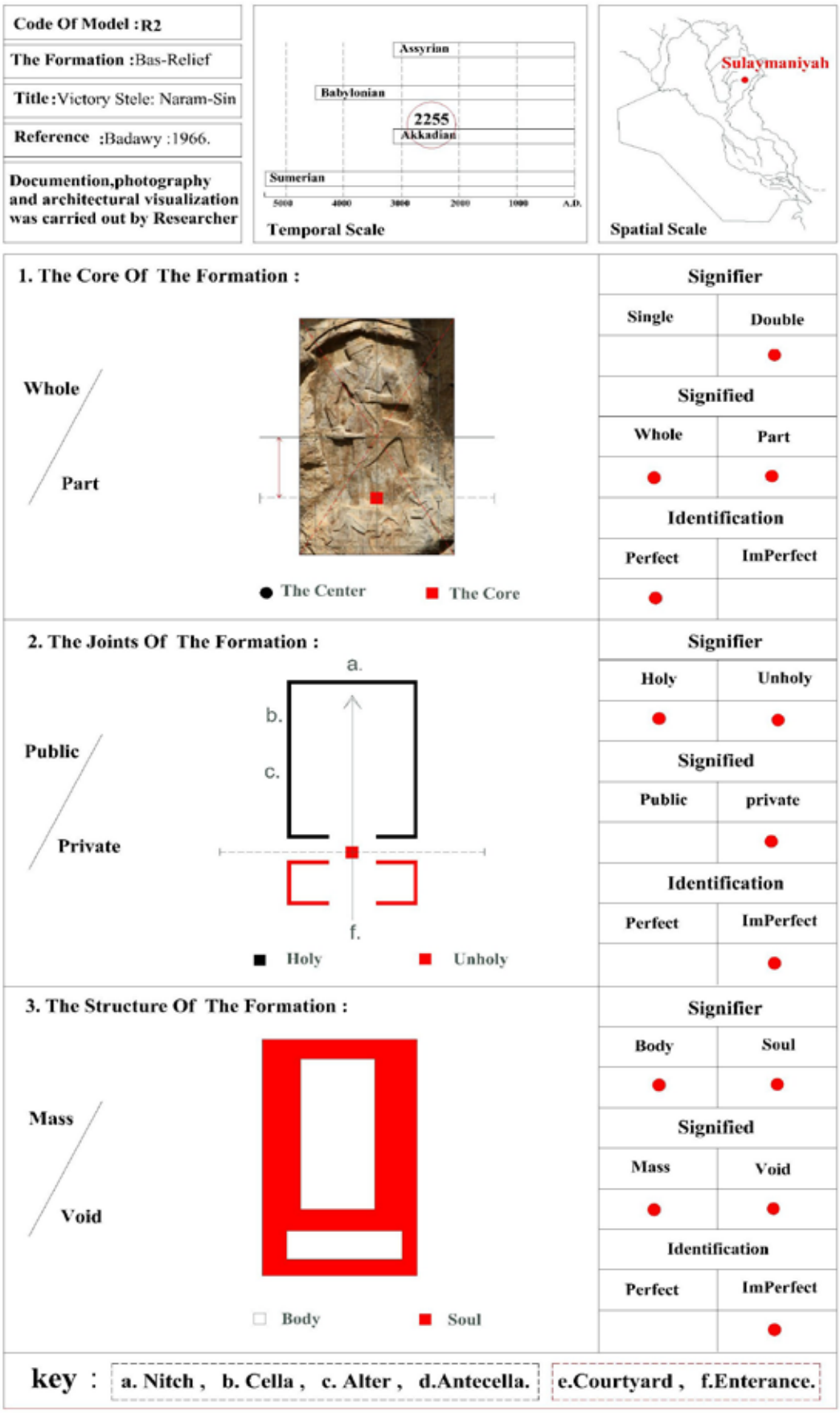
Architectural product	Code	Title	Place	Time B.C	Culture
Bas-Relief	R5	Bas-Relief	Nineveh	1800	Assyrian

(Source: Photographic Documentation by the Author: 2009).

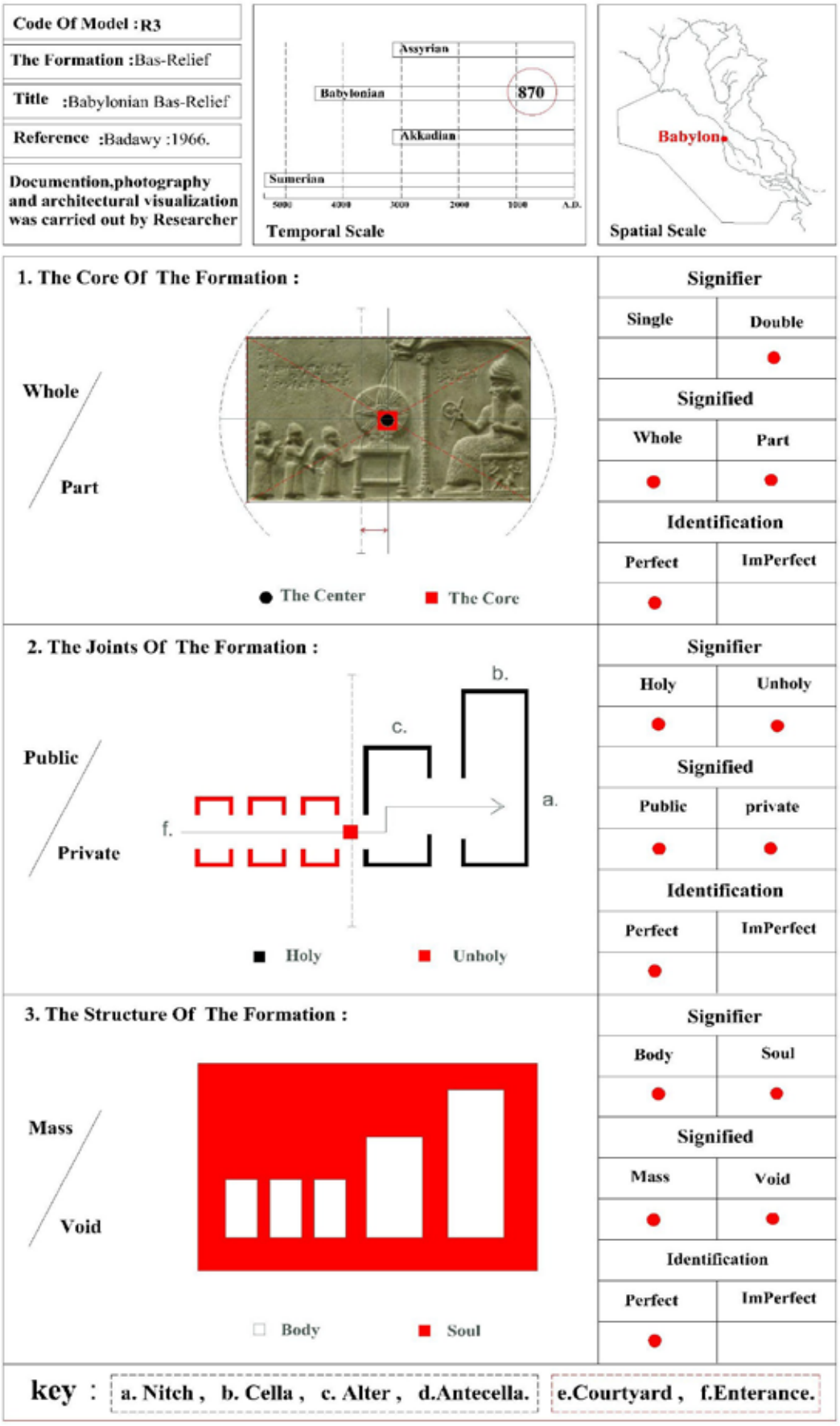
Figures:4.46: Applying the Analysis of the Cultural - Architectural Product:R1.



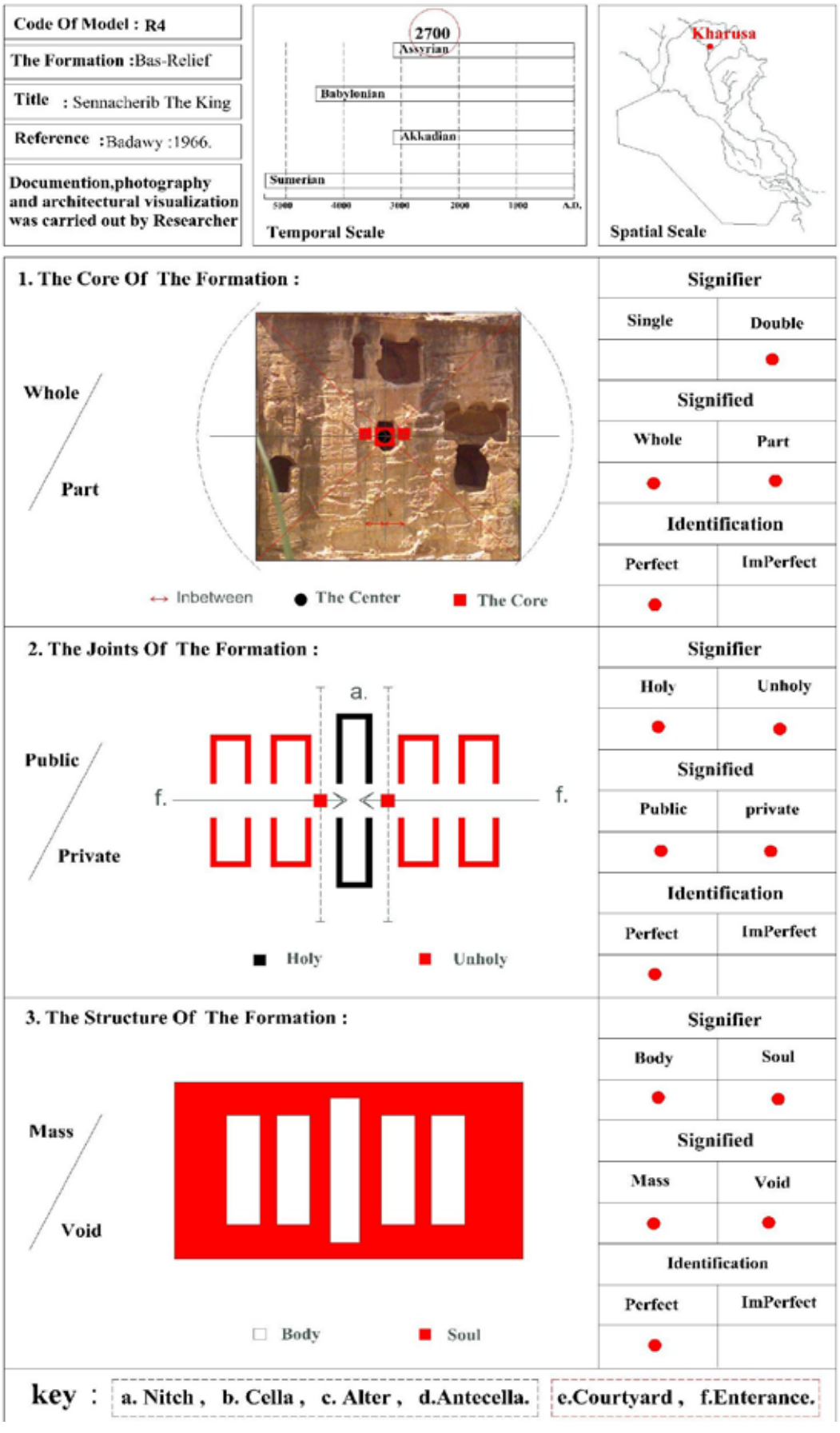
Figures:4.47: Applying the Analysis of the Cultural - Architectural Product:R2.



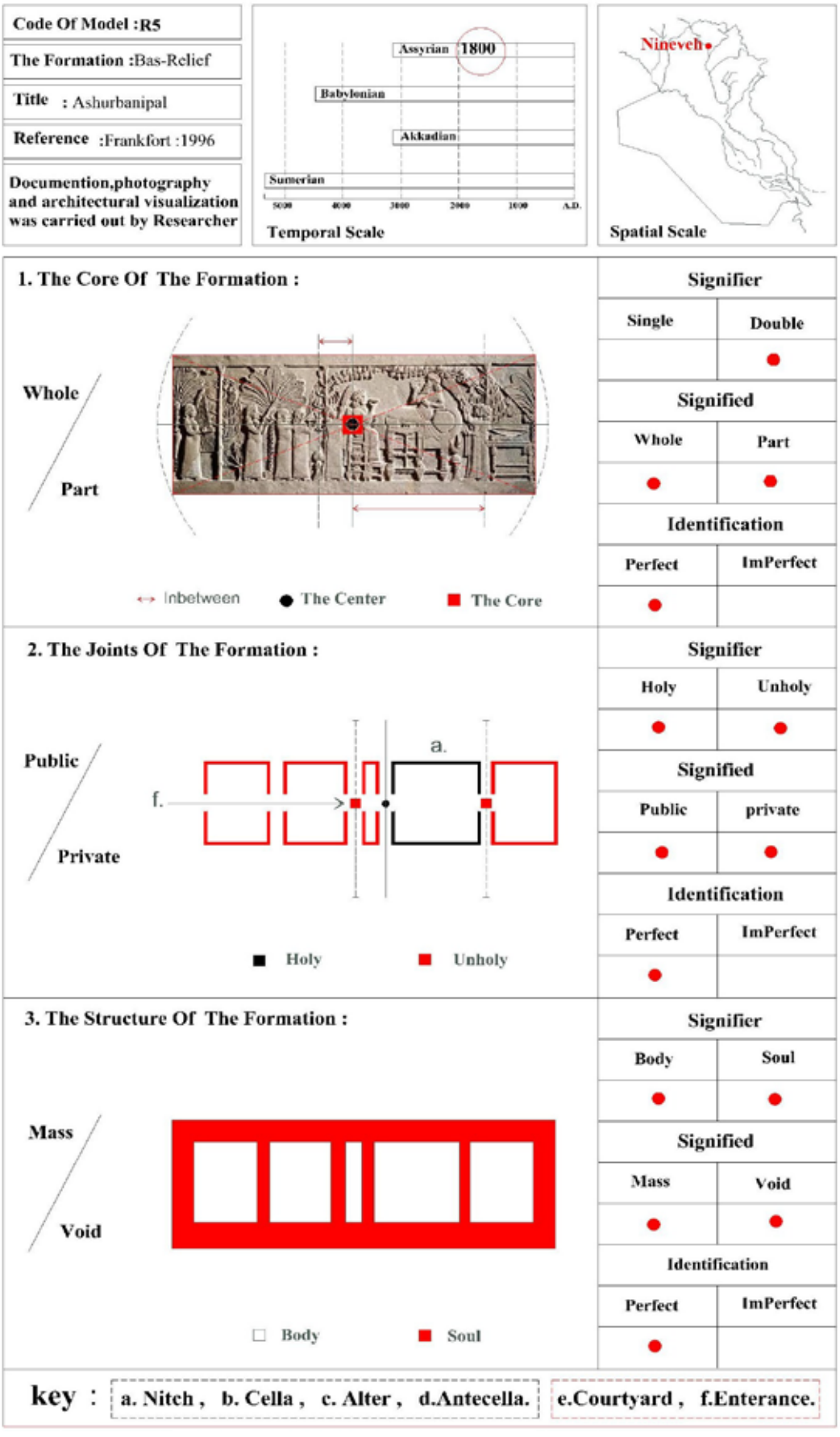
Figures:4.48: Applying the Analysis of the Cultural - Architectural Product:R3.



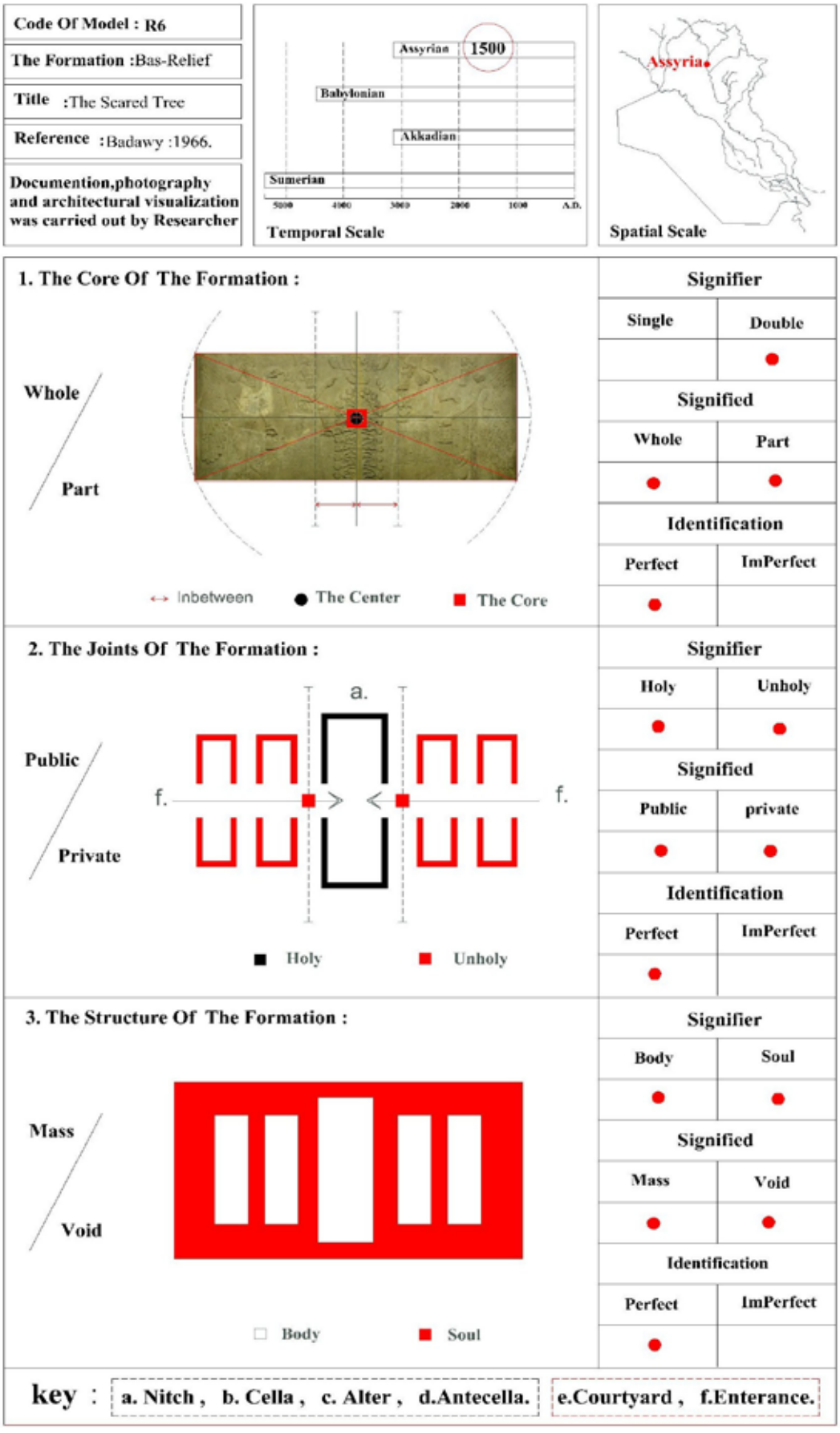
Figures:4.49: Applying the Analysis of the Cultural - Architectural Product:R4.



Figures:4.50: Applying the Analysis of the Cultural - Architectural Product:R5.



Figures:4.51: Applying the Analysis of the Cultural - Architectural Product:R6.



4.6.3. Results of Analyzing the Cultural - Architectural Product

4.6.3.a. Results of Analyzing: The Temenos

1. The Core of the Formation (Whole - Part).

Sumerian & Akkadian	The cultural core -Temenos- is central location or in a location which is slightly deviated from the center, and that is as a natural product of the natural organic growth around the temple of the group of the first temples.
Babylonian & Assyrian	The cultural core -Temenos- began to move away from the center. Its location was on the edge of the city, and in some cities, several cities emerged from a cultural core-Temenos.

2. The Joints of the Formation (Public - Private).

Sumerian & Akkadian	An apparent isolation between the public and the private reaches a full isolation, heading towards the inward and closing the temenos from the outward, the walls are deaf and thick and clear fortification. So, the temenos is a separate part from the whole which is represented by the external surrounding.
Babylonian & Assyrian	An apparent isolation between the public and the private confirmed by separating the public from the private with a transitional space between them, evident linear space sequence and adopting space loops or joints as transitional spaces between the parts. The temenos seems more opened to the external world, yet, general orientation is to the inward as well as focusing on the peculiarity of the internal parts.

3. The Structure of the Formation (Mass - Void).

Sumerian & Akkadian	Huge mass and the proportion of the mass to the vacuum caused by the internal courtyards is great. A large mass proportion compared to vacuum.
Babylonian & Assyrian	Huge mass, yet with large courtyards from inside which act to balance the proportion of the mass to the vacuum.

4. Formal Organization.

Sumerian & Akkadian	The core -Temenos- is organic arrangement, but the total shape of the core which became a whole is a geometrical organization unless it contradicts with the experimental ideal orientations.
Babylonian & Assyrian	The Babylonian-Assyrian: The core -Temenos- is of a geometrical organization and the total shape as a whole and part is with geometrical organization that gets along with the rational ideal orientations.

4.6.3.b. Results of Analyzing: The Temples

1. The Core of the Formation (Whole - Part).

Sumerian & Akkadian	The temple is an integrated unit where the shape values prevail upon the values of its separate parts. So the total shape is prevalent while the parts maintain their independence within the whole. Relationships among the parts are weak; movement sequence among spaces is unclear and clear prevalence of the whole. Emphasizing these values is conducted through the broken movement, vestibule paths and indirect transitions amongst the parts as well as ignoring the points of transition, unavailability of clear joints between the spaces and masses, also the relation amongst the spaces is not sequential and weak.
Babylonian & Assyrian	The temple acts as an integrated whole with much more importance given to the relationship among the parts. So, the total shape is balanced with the parts within the whole. Relationship among the parts is vigorous and the sequence of the movement among the spaces has become more evident as well as the focus on the sub transition areas and articulation spaces. The balance of the whole and the parts is evident. Emphasizing these values is conducted through the clear movement paths and direct transitions amongst the parts as well as paying considerable attention to the points of transition, availability of clear joints between the spaces and masses, and the relation amongst the spaces is sequential and strong.

2. The Joints of the Formation (Public - Private).

Sumerian & Akkadian	Transition is direct from the general to the private as there is no movement sequence between the general and the private along with confirming the independence and the importance of the private part. Heading towards the inward with maintaining the peculiarity of the private part and its holiness, confirming the mass, camouflaged entrances, using indirect entrances and separating the inward from the outward.
Babylonian & Assyrian	Progression between the general and the private is achieved through vestibules, a dual and tri-movement sequence is found between the general and the private along with confirmation on the importance of the private part. Heading towards the inward, yet more opened to the outward. Thus orientation is still towards the inward, the mass is deaf but with multiple entrances. There is almost an entrance at each side of the temple.

3. The Structure of the Formation (Mass - Void).

Sumerian & Akkadian	The mass is basically prevalent with probable confirmation on the mass of the most important part. Vacuums are relatively small if not absent. Thus, the mass rate is great relative to the vacuum.
Babylonian & Assyrian	The mass is reduced by increasing the number and the size of the internal opened vacuums and which act as a unit of vacuum to create balance between the mass and the vacuum. Thus, the mass rate is balanced relative to the vacuum.

4. Formal Organization.

Sumerian & Akkadian	The total system of the temple is dominated by the organization of touching and adjacency amongst the spaces without any jointed relations amongst them. The additive composition is the dominant feature in the temple in which different activities gather organically but within the geometrical framework of the formation as a whole. There is a distinctive geometrical organization adopting the basic shapes in the formation such that there is no contradiction with the empirical orientations.
Babylonian & Assyrian	The total system of the temple is overcome by the interrelation of spaces, with clear jointed relations. The linear composition is the dominant characteristic in the temple in which different activities assemble geometrically within the geometrical framework of the formation as a whole. There is a distinctive geometrical organization adopting the basic shapes in the formation relative to the rationalistic inclinations.

5. Basic Components.

Cella.

Sumerian & Akkadian	Models are composed of simple cella and their relationship with the entrance and the movement axes is clear. The longitudinal cella is the dominant feature. The cella has a direct relationship with the courtyard and the entrance axis and perpendicular to the niche in general. The longitudinal cella was used in all the temples.
Babylonian & Assyrian	Models are composed of complex cella and its relationship with the entrance and the movements axes are complex. The transverse cella is widely dominant. The relationship of the cella is indirect with the yard and the entrance is parallel to the niche in general. Transverse cella was used in all the ground temples adjacent to the ziggurat.

Ante Cella.

Sumerian & Akkadian	The models consist of a simple ante cella that controls the sequence of the movement and the spatial sequence from the public to the semi-private that is represented by the holy cella, which exists with the longitudinal cella; used frequently in the temples in which the entrance is located in the axis that is perpendicular with the cella.
Babylonian & Assyrian	The models consist of a simple ante cella that controls the sequence of the movement and the spatial sequence from the general to the semi-private that is represented by the holy cella, which exists with the transverse cella; and it is used frequently in the temples in which the entrance is located in the axis that is perpendicular with the cella.

Entrances.

Sumerian & Akkadian	The models are made up of one entrance, either on the short side of the temple plan and direct axially with the cella and opposite to the altar, or it is lateral on the long side and perpendicular to the cella.
Babylonian & Assyrian	The models are made up of several entrances, a main entrance and one entrance or more. One of them is axial and direct with the cella and the other is parallel to it.

The Courtyard.

Sumerian & Akkadian	The models lack courtyards, and if there is a courtyard, it is located outside the temple before the entrance.
Babylonian & Assyrian	The models were characterized by the apparent courtyard which comes after the entrance area. So the courtyard is an internal space related to the temple and a fundamental element.

4.6.3.c. Results of Analyzing: The Palaces

1. The Core of the Formation (Whole - Part).

Sumerian & Akkadian	The parts of the palace act separately and relationships among them are unclear - multiple centers - combined by the total regular shape of the external boundaries.
Babylonian & Assyrian	The parts of the palace act integrally in a form of sub systems interacting with each other and the relationships among them are clear - one center - within the single whole which acts as a basic system.

2. The Joints of the formation (Public - Privet).

Sumerian & Akkadian	An apparent isolation between the public and the private reaches a full isolation. Space sequence is unclear, adopting fractured axes, the entrances are unclear to confirm peculiarity and elevating the private section to a higher level. Confirming on heading towards the inward and closing the palace from the outward, the walls are deaf and thick without openings, camouflaging the openings and clear fortification. So, the palace is a separate part from the whole which is represented by the external surrounding.
Babylonian & Assyrian	An apparent isolation between the public and the private confirmed by separating the public from the private with a transitional space between them, evident linear space sequence and adopting space loops (knots) or joints as transitional spaces between the parts. The palaces seem more opened to the external world; yet, general orientation is to the inward as well as focusing on the peculiarity of the internal parts with fortified limited entrances. Still, its existence within the town suggests a feeling of openness.

3. The Structure of the Formation (Mass - Void).

Sumerian & Akkadian	Huge mass and the proportion of the mass to the vacuum caused by the internal courtyards is great. A large mass proportion compared to vacuum.
Babylonian & Assyrian	Huge mass, yet with large courtyards from inside which act to balance the proportion of the mass to the vacuum.

4. Formal Organization.

Sumerian & Akkadian	The total system of the palace is dominated by the organization of touching and adjacency amongst the spaces without any jointed relations amongst them. The additive composition is the dominant feature in the palace in which different activities gather organically but within the geometrical framework of the construct as a whole. So, the total system of the palace is prevailed by strict geometrical organization. The parts are geometrical, yet organization among the parts is organic and unclear. There is a distinctive geometrical organization with adopting the basic shapes in the formation such that no contradiction with the empirical orientations is obvious.
Babylonian & Assyrian	The total system of the palace is dominated by the interrelation of spaces, with clear jointed relations. The linear composition is the dominant characteristic in the palace in which different activities assemble geometrically within the geometrical framework of the construct as a whole. So, the total organization of the palace is a natural product of parts' overlap besides adopting a geometrical ground on the irregular total shape resulted from the overlap at the level of the parts. There is a distinctive geometrical organization adopting the basic shapes in the formation relative to the rationalistic inclinations.

5. Basic Components

The Main Reception Hall.

Sumerian & Akkadian	Models are made up of a simple main reception hall that open to the courtyard with two entrances at the two ends of the two long sides which are adjacent to the courtyard.
Babylonian & Assyrian	Models are made up of a complex main reception hall with one entrance in the middle, opposite to the throne, and two entrances were added on the same long side.

The Reception Hall.

Sumerian & Akkadian	Models are made up of one simple reception hall.
Babylonian & Assyrian	The models are composed of a complex reception hall and we find two reception halls; one of them is the main and the general, which is called Babanu and the other is the private, which is called Bitanu.

The Entrance.

Sumerian & Akkadian	The models consist of one simple entrance, indirect and consist of two transitional spaces. The movement is indirect and changing all the way to the general main courtyard through which the movement to the different spots of the palace is distributed.
Babylonian & Assyrian	The models comprise a complex entrance, and we might find more than one. These entrances could be indirect and consist of two transitional spaces. The movement is indirect and changing also all the way to the general main yard through which the movement to the spots of the palace is distributed.

The Royal Suite.

Sumerian & Akkadian	The models comprise one simple royal suite in general.
Babylonian & Assyrian	The models comprise a complex royal suite, and after that more than one, two in general.

The Courtyard.

Sumerian & Akkadian	Models are without a courtyard, if there is a yard, it is then single.
Babylonian & Assyrian	Models were characterized by the existence of more than one courtyard, two in general.

Sanctuary.

Sumerian & Akkadian	The models are composed of a simple sanctuary, in general adjacent to the palace.
Babylonian & Assyrian	The models are composed of a complex sanctuary, and there has been more than one, two in general, which are adjacent to the palace in spite of the separation of the religious and constitutional authorities.

4.6.3.d. Results of Analyzing: Stele, Bas-Relief, and Cylinder Seal

1. The Core of the Formation (Whole - Part).

Sumerian & Akkadian	The models are composed of parts among which relationships seem missing because focus is on the definition of the boarders of the complete whole.
Babylonian & Assyrian	The models are composed of parts that are correlated with clear relationships with each other within the complete whole.

2. The Joints of the Formation (Public - Privet).

Sumerian & Akkadian	Transition is direct from the public to the private as there is no movement sequence between the public and the private along with confirming the independence and the importance of the private. Heading towards the inward with maintaining the peculiarity of the private part and its holiness.
Babylonian & Assyrian	Progression between the public and the private is achieved through a movement sequence between the public and the private along with confirmation on the importance of the private part. Heading towards the inward, yet more opened to the outward.

3. The Structure of the Formation (Mass - Void).

Sumerian & Akkadian	Huge mass and the proportion of the mass to the vacuum is great. A large mass proportion compared to vacuum.
Babylonian & Assyrian	Huge mass, yet act to balance the proportion of the mass to the vacuum.

4. Formal Organization.

Sumerian & Akkadian	The Sumerian-Akkadian Stele, Bas-Relief and Cylinder Seal are organic arrangement, but their total shape which became a whole is a geometrical organization unless it contradicts with the experimental ideal orientations. This relationship is also evident at the level of the detailed frontage. Therefore, we find the Sumerian-Akkadian ornaments consist of a great deal of mini parts among which the relationships are absent as well as the boundaries between the ornamentation rows in order to achieve their uniqueness and independence.
Babylonian & Assyrian	The Babylonian- Assyrian Stele,Bas-Relief And Cylinder Seal, however, are a geometrical organization and their total shape as a whole and part is geometrical organization that gets along with the rational ideal orientations. This relationship also appears at the level of detailed frontage treatments. Thus we find the Babylonian- Assyrian ornamentations consist of a great deal of mini parts among which the relationships are vigorous and there is no concern about the boundaries between the rows of ornamentation for achieving uniqueness and independence.

What was presented about the analysis of the Mesopotamian cultural product, represented by the temples and palaces the Sumerian - Akadian on the one hand and the Babylonian - Assyrian on the other, has enabled to diagnose its main structures which are represented by three main structures, that formed the structure of its architectural expressions which were represented by the core of formation; whole and part, and the joint of formation public and private and the structure of formation mass and void that constitute as a whole the signified values of the architectural prototype.

Thus we can now demonstrating the congruence between the mental expressions structure and the structure of the architectural expressions of the Mesopotamian civilization. Where, chapter five was designed to define the special cognitive status which is related to the third point in testing the central hypothesis.

CHAPTER FIVE

CONCLUSIONS

5.0. Introduction

Chapter Five was designed to define the special cognitive status which is related to the third point in testing the central hypothesis and that was done in three sections. Section One involves conformity of the results obtained in chapter four i.e. reflection of the immaterial product - mental expressions structure -represented by the core of the Mesopotamian cultural architectural product on the material product - architectural expressions structure - represented by the product itself, within its cultural environment. Section Two includes the general conclusions related to the theoretical framework and the special conclusions related to the results of the study reached in chapter four and chapter five. Section Three involves the presentation of the final conclusions of the study, in addition to formulating the study recommendations, the domain of future studies and the beneficiaries of the study.

5.1. Identification

Here we must mention the view of the Greek Parmenides[(101)] about the illusions of Sophism, where some of the ancient Greek philosophers before Socrates tried-from his point of view- to explain the nature of the physical world around them, but they have deviated far from logic and objectivity. In a world that looks moving and in continuous change, Parmenides was convinced that every change is a kind of illusion made by the human mind and imagination, and no world is independent from man.

René Descartes suggests that there is a turn in intellectual attitudes and in the forms of existence in time, and that ourselves and our intellectual attitudes are a result of an ever changing turnings whose hypotheses are the situations and conditions of our age the way we see and perceive them. So; should we ever accept the method that is considered the right one to look for things, or is it possible to be defiant and change the history structures and systems in order to find new methods for considering these things.

Those questions have led us to our efforts in restoring the symbolic cultural dimension of Mesopotamian cultural - architectural product, in this study;

Here we dare say that because there is no writings or theories interpreting the relationship of knowledge and sciences in the Mesopotamian culture components reported by ancient writers and architects that would make the discussion on the subject something like subjective interpretations and skipping the present concepts on those components. Yet; the architectural deeds of Mesopotamia have encouraged us to suppose that the architects and the artists of the Mesopotamian cultural components had got elaborated rules for Measurement originated from their common cultural mental perception. Temples' architects might have developed a repeatable method and reproducing by using the rope and the stake to infer circles and the main regulating lines or lineaments. That can be observed through the geometrical alignment of the architectural and artistic patterns, such that an evident visual base of culture can be seen in them, and enable me to confirm in this study the invalidity of the idea that says the religious men and some of the scribes in the Mesopotamian temples were responsible for building them, i.e. the Mesopotamian components were formed spontaneously by normal people having little experience in installation and construction.

The visual base of culture has its rules which are based on social consciousness and unconsciousness of culture that make it constant in certain cultural-architectural product across space-time and can be restored through the architectural prototype.

Therefore, the detection process the congruence between the non material product-mental expressions structure or The signifier values of the architectural prototype- represented by the core of the Mesopotamian cultural architectural product and the material product-architectural expressions structure or the signified values of the architectural prototype-represented by the product itself, within its cultural environment. That is what gives it the status of originality. So, the architectural prototype requires:

5.1.1. Diagnosis

This is done through the diagnostic study of the architectural expressions structure or the signified values of the architectural prototype according to:

- The core of the formation: whole - part : (Figure: 5.0, & 5.1) for a variety of temples, palaces, Sumerian - Akkadian and Babylonian - Assyrian.
- The joints of the formation: public - private : (Figure: 5.2, & 5.3) for a variety of temples, palaces, Sumerian - Akkadian and Babylonian - Assyrian.
- The structure of the formation: mass - void : (Figure: 5.4, & 5.5) for a variety of temples, palaces, Sumerian - Akkadian and Babylonian - Assyrian.

5.1.2. Conformity

This is done through testing the Conformity of the mental expressions structure or the signifier values of the architectural prototype with the architectural expressions structure or the signified values of the architectural prototype. This is done through:

- Testing the conformity (Table: 5.0) of the immaterial product - mental expressions structure according to the structure of the origin: single - double with the material product - architectural expressions structure according to the core of the formation: whole - part.
- Testing the conformity (Table: 5.1) of the immaterial product - mental expressions structure according to the structure of the evaluation: holy - unholy with the material product - architectural expressions structure according to the joints of the formation: public - private.
- Testing the conformity (Table: 5.2) of the immaterial product - mental expressions structure according to the structure of the organization: body - soul with the material product - architectural expressions structure according to the structure of the formation: mass - void.

Resorting to this mechanism to prove the hypothesis of the study, its goal was the result of the fact that the Mesopotamian cultural-architectural products stretched out over spatially and temporally and which refused to express itself, register its philosophy or carry the names of its innovators; it’s a production isolated from its compiler.

Figure:5.0: The Core of the Formation: Whole - Part: For a Variety of Temples, Sumerian - Akkadian and Babylonian - Assyrian.

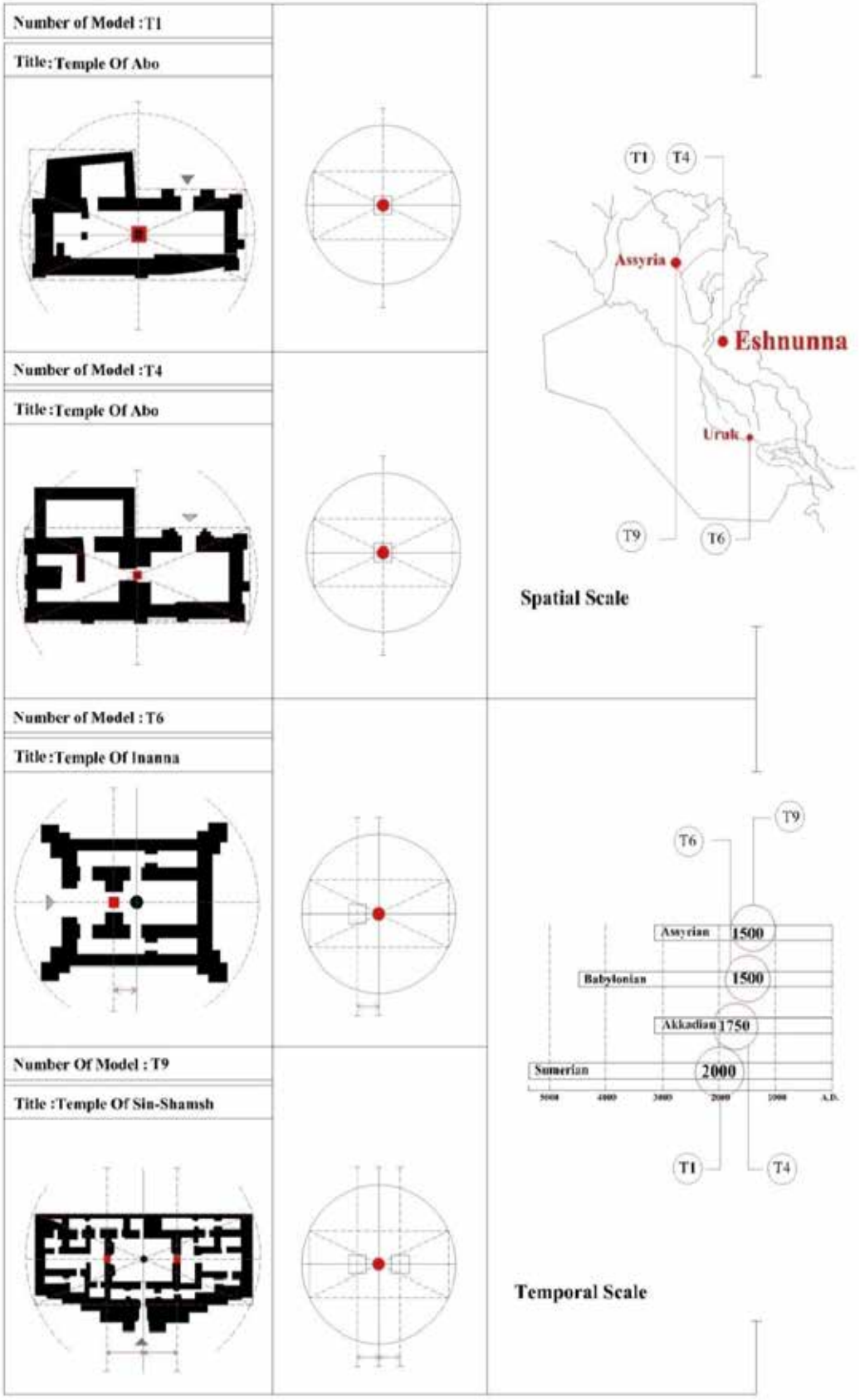


Figure:5.1: The Core of the Formation: Whole - Part: For a Variety of Palaces, Sumerian - Akkadian and Babylonian - Assyrian.

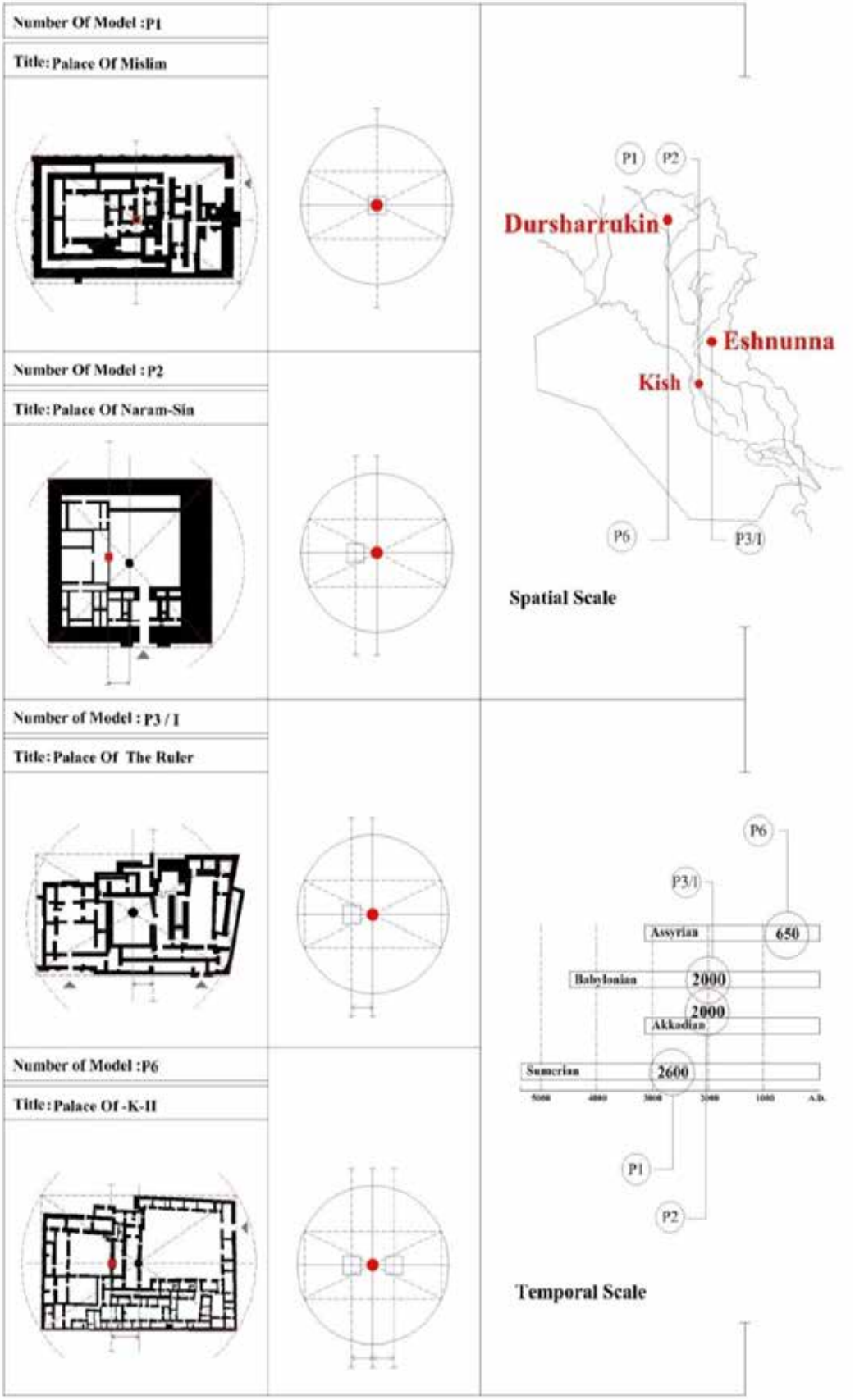


Figure:5.2: The Joints of the Formation: Public - Private: For a Variety of Temples, Sumerian - Akkadian and Babylonian - Assyrian.

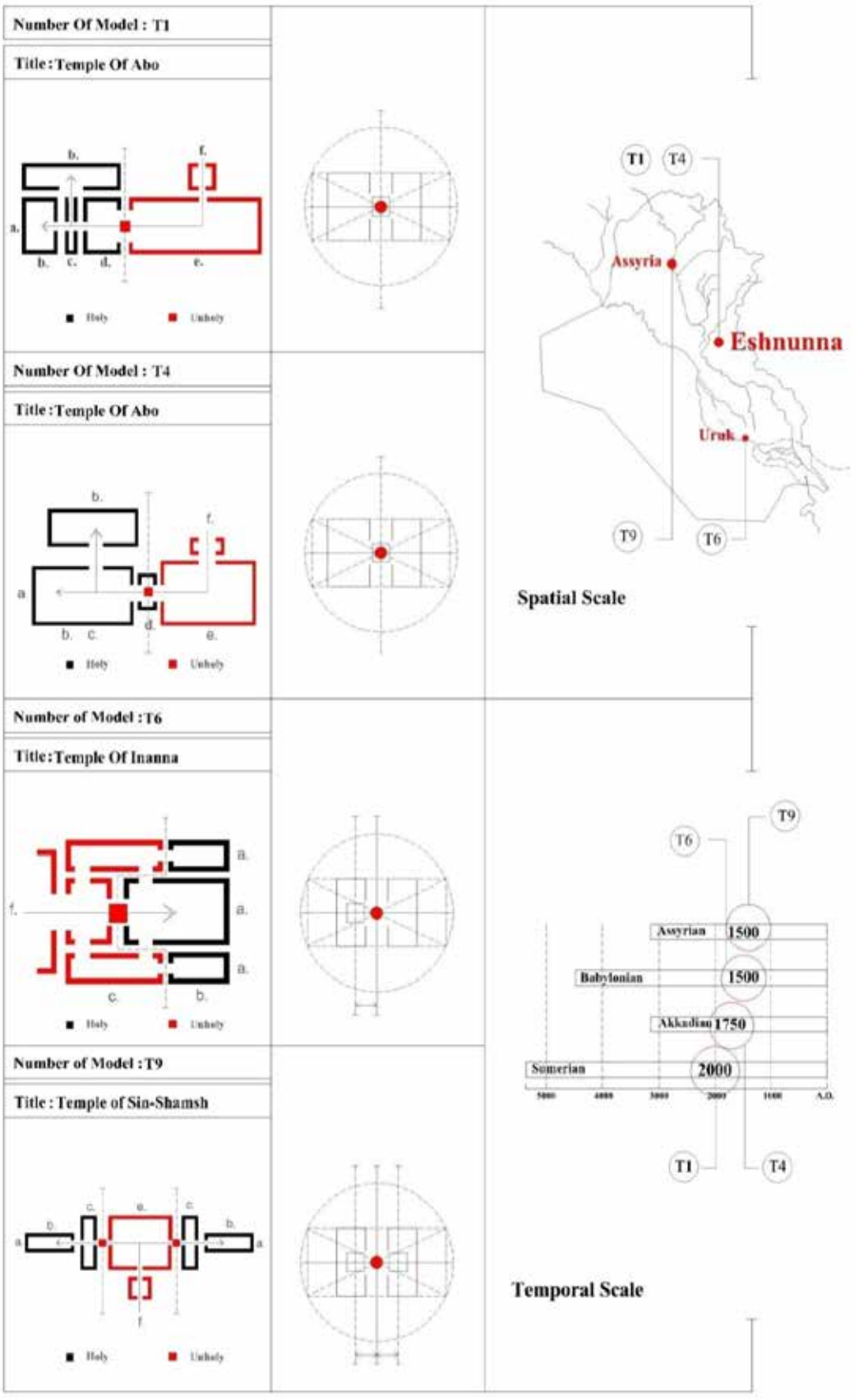


Figure:5.3: The Joints of the Formation: Public - Private: For a Variety of Palaces, Sumerian - Akkadian and Babylonian - Assyrian.

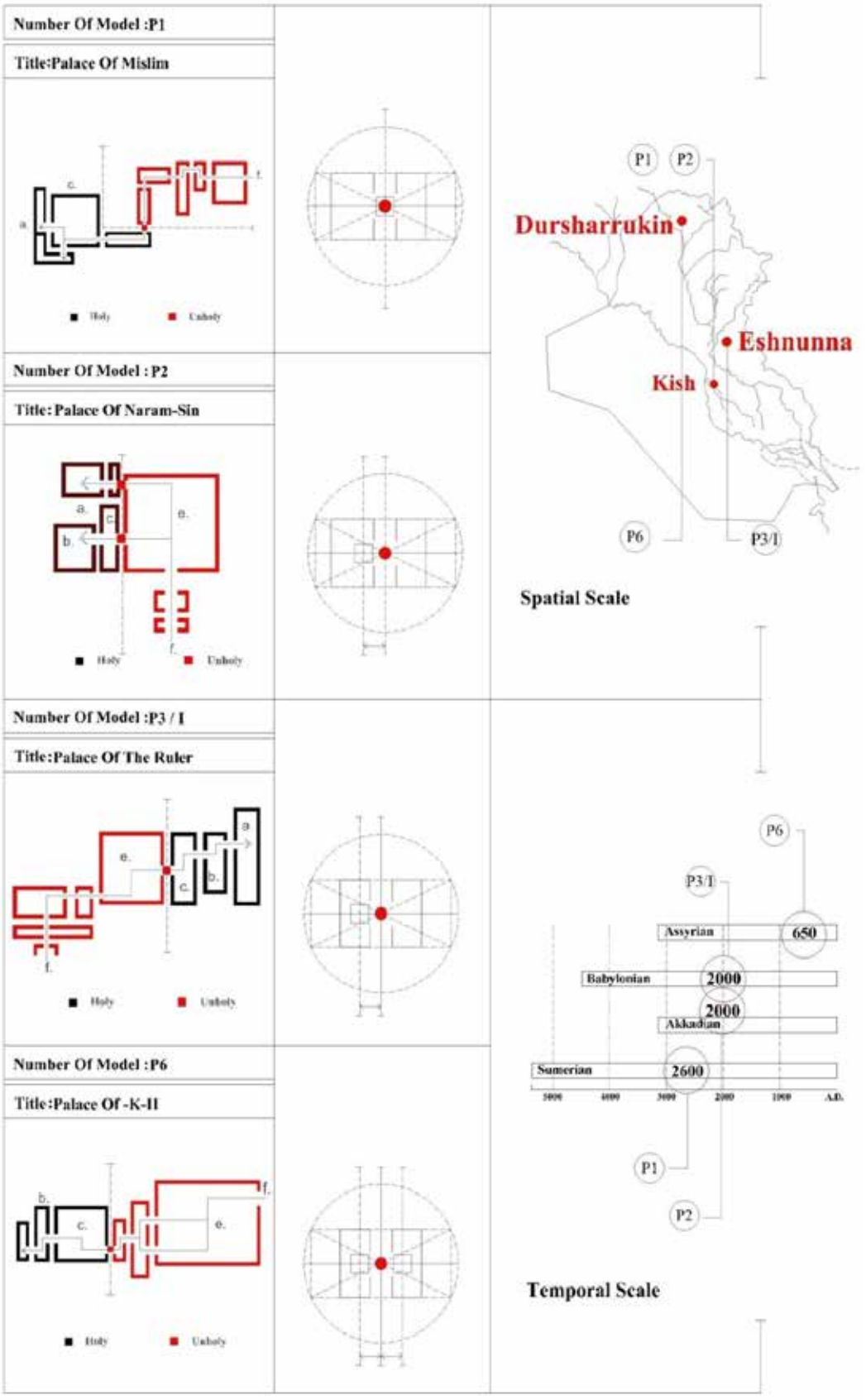


Figure:5.4: The Structure of the Formation: Mass - Void: For a Variety of Temples, Sumerian - Akkadian and Babylonian - Assyrian.

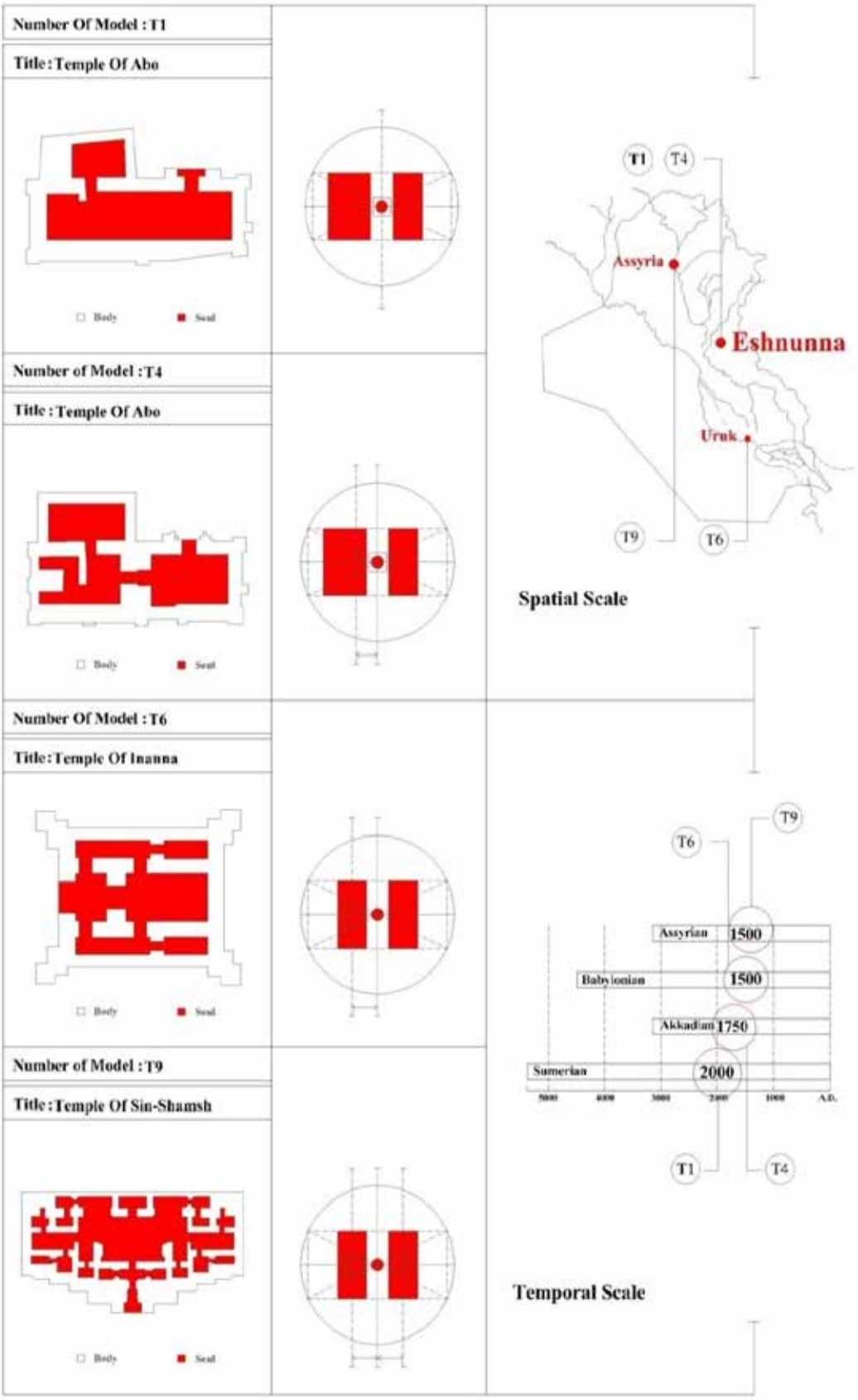


Figure:5.5: The Structure of the Formation: Mass -Void: For a Variety of Palaces, Sumerian - Akkadian and Babylonian - Assyrian.

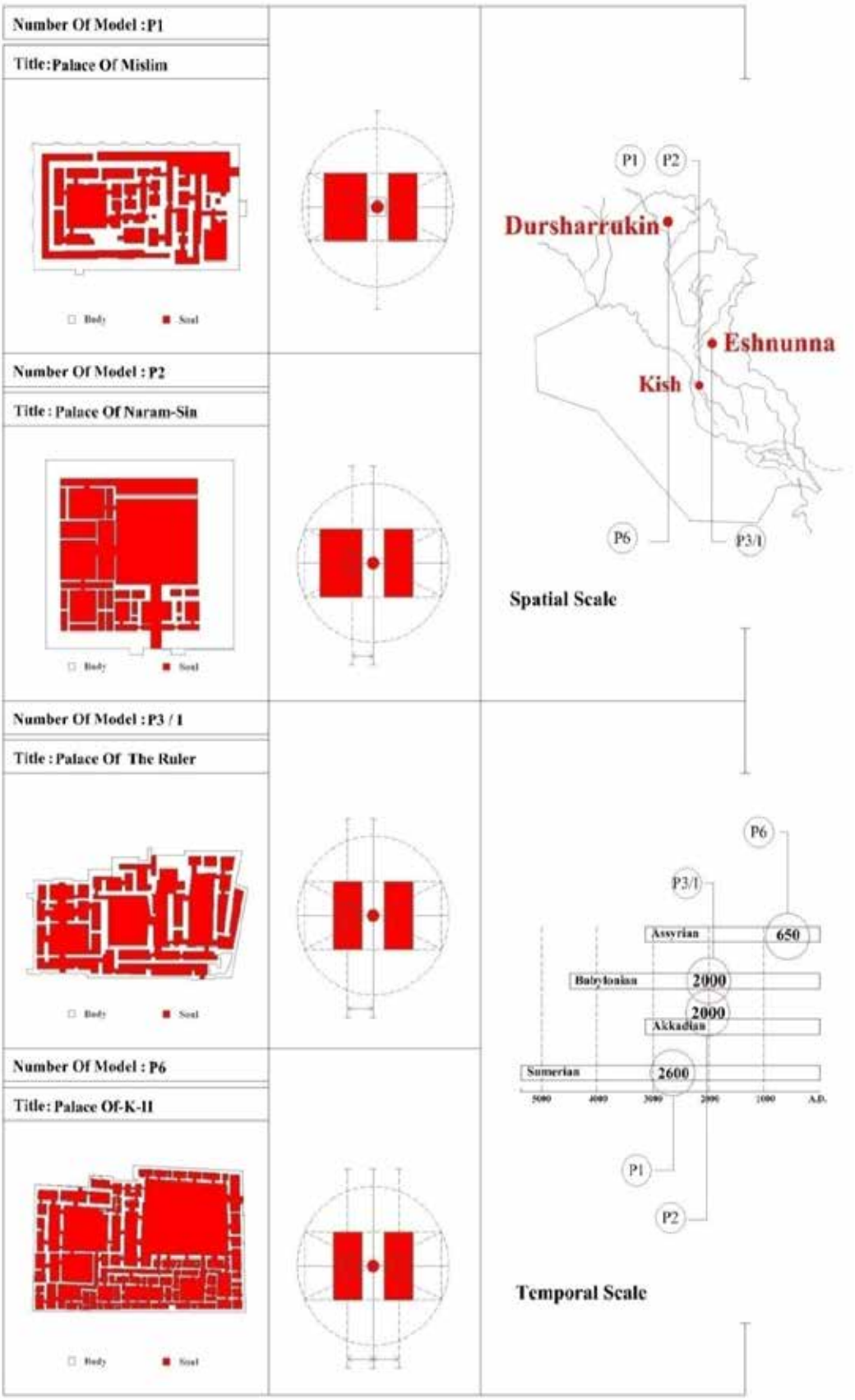


Table:5.0: The Identification Between the Immaterial Product – Mental Expressions Structure: The Structure of the Origin: Double - Single with the Material Product - Architectural Expressions Structure: The Core of the Formation: Whole - Part.

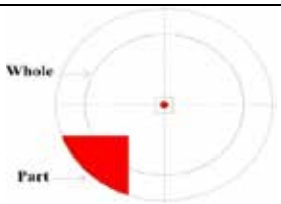
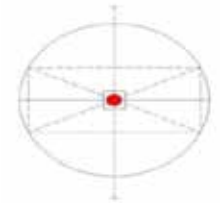
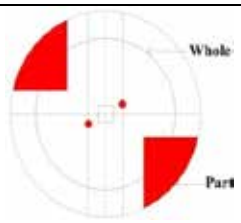
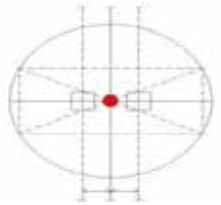
	The Immaterial Product- Mental Expressions Structure.	The Material Product- Architectural Expressions Structure.
Sumerian & Akkadian		
Babylonian & Assyrian		

Table:5.1: The Identification Between the Immaterial Product – Mental Expressions Structure the Structure of the Evaluation: Holy - Unholy with the Material Product - Architectural Expressions Structure: The Joints of the Formation: Public - Private.

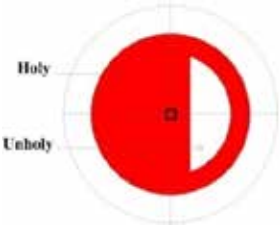
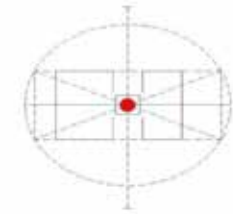
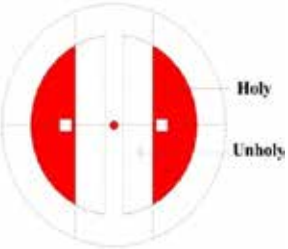
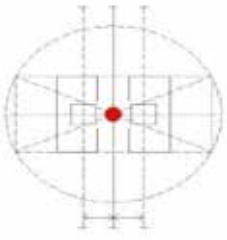
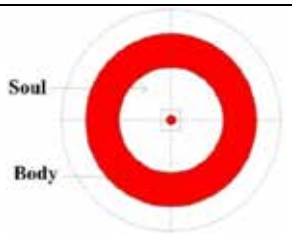
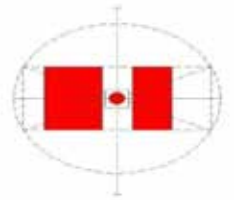
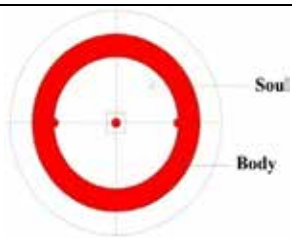
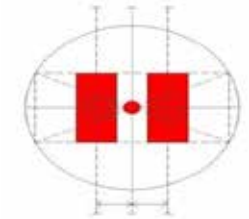
	The Immaterial Product- Mental Expressions Structure.	The Material Product- Architectural Expressions Structure.
Sumerian & Akkadian		
Babylonian & Assyrian		

Table:5.2: The Identification Between the Immaterial Product – Mental Expressions Structure the Structure of the Organization: Body - Soul with the Material Product - Architectural Expressions Structure: The Structure of the Formation: Mass - Void.

	The Immaterial Product- Mental Expressions Structure.	**The Material Product- Architectural Expressions Structure.**
Sumerian & Akkadian		
Babylonian & Assyrian		

This congruence between the non-material product - mental expressions structure or the signifier values of the architectural prototype - is represented by the core of the Mesopotamian cultural architectural product and the material product - architectural expressions structure or the signified values of the architectural prototype - represented by the product itself, within its cultural environment. This is what gives it the status of originality. Thus it becomes clear that the central hypothesis of the study is correct, and thus achieve the objective of the study represented by clarifying the knowledge related to the cultural architectural product in terms of the reflection of the mental product - mental expressions structure - represented by the core of the Mesopotamian cultural architectural product on the material product - architectural expressions structure - represented in turn by the architectural product itself, within its cultural environment, which formulates the

particularity- contemporary cultural architectural identity related with the Mesopotamian cultural product.

5.2. Conclusions of the Study

5.2.1. The General Conclusions

5.2.1.a. The Cultural Environment - Cultural Heritage in Architecture

The construction of a comprehensive framework for a contemporary architectural theory, through which the contemporary or the historical cultural - architectural products should be done within the cultural perspective or the cultural environment which has a vital role on all the ingredients of culture and its products, especially the intellectual structure of culture that forms the mechanism of its cultural and architectural particularity.

Tackling the cultural environment to interpret the cultural-architectural products should anchor on the concepts of the spirit of the age and the cultural species, as they relate culture to two sorts of factors:

- First: The factors resulting from the non-material world, which are related to the metaphysical environment.
- Second: The factors resulting from the material world, which are related to the physical environment.

These factors per se lead to the formation of the particularity of the cultural - architectural product. So, the relationship between the cultural products and society must be a relationship of production and not a relationship of change. Culture imposes very specific requirements for the cultural-architectural production process; the temporary architectural product is formulated by elements such as materials and

technology, which limit, in their nature, the general cultural framework, and they are related to the physical environment. But the permanent architectural product is formed by other factors like philosophy, knowledge, theological approach and myth which are not identified, by their nature, in the general cultural framework and these are related with the metaphysical environment.

The factors resulting from the non-material world which are related to the metaphysical environment represent the essence of the cultural entity and the primary soul-core that guides the culture. Consequently, we find that the culture tends to use a special structure for its immaterial intellectual expressions, reflecting them by a structure which identifies its materialistic architectural expressions. This makes what seems to be sound and normal in a certain culture, wrong in another culture.

So, they are the reasons behind the various architectural procedures of any culture. For example, in the Renaissance, it was thought that if a church is built in accordance with the basic mathematical proportionalities, we would react with it instinctively, i.e. an internal feeling would tell us - without any rational analysis - that we recognize an image of the vigor behind the whole issue, i.e. the power of God. The main difference between the middle ages and the Renaissance age had been associated with the changing concept about God, i.e. Christ as a necessity for the perfection and harmony renewed with him. When he died on the cross for the humanity, the cosmic Pythagorean of numbers which was used in the middle ages had to suffer in conversion to Christianity and in the renaissance it had to be purified through another concept of Christianity and another philosophy. And then it had to change to be consistent with the world post Einstein[(102)].

5.2.1.b. Systems of Studying the History of Architecture

The study of architectural history should not be limited to one of the two systems; the descriptive and the analytical systems, which are both considered the fundamental systems in studying architecture in general. So, dealing with the art and architecture history, especially concerning the aspects that are viewed as part of the culture, should be in the light of the complete point of view of the architectural history, and which is considered the cultural-architectural product that expresses the society view to its existence. Therefore, its study ought to be within the cultural context or the cultural environment of the social action of the culture. This consequently requires a full understanding of all other systems relevant to the architectural history such as the archaeological system and other systems relevant to the study of architectural history.

The cultural environment, in its interpretation of the cultural-architectural products, with the spirit of the age and the cultural species can be identified by the mental excavation of the concept and the idea of the architectural prototype which are ideas that are contained and containing the artistic and architectural of any culture and through which we can identify their cultural dimensions. These cultural dimensions possess their denotations from the age in which they were written or in which they were formed. But their influence can be sensed in later times. Therefore, a methodological analysis is introduced for the method of making the cultural product structure through its architectural scales, because the most influential aspects are the social and anthropological aspects as they are tightly related to the concepts of the spirit of the age and the cultural species.

The process of extracting the architectural prototype is of a great importance because it is a method to rooting the historical cultural-architectural products and it

results in the implication of the principles concluded from the past cultural product through knowing how these intellectual principles extract the culture in its architectural product. It is also through knowing that those principles remain effective in the future cultural product as it represents the abstract level connected with the core that constructs the architectural product on the one hand and with the product itself on the other i.e. the intellectual product - the theory - the material product - the application - of any culture and it is of a profound cognitive level, constituting the fundamental rules and the internal system of the cultural - architectural product.

The architectural prototype is one of the most significant of the formational bases of the cultural-architectural products in their abstract level. It is considered one of the most prominent concepts in the theory and history of architecture in general. The importance of this concept lies in its tight relation with the concepts of the spirit of the age and the cultural species that constitute the particularity and the cultural identity which, in turn, leads to the cultural originality of its special and original architectural products. The architectural prototype is related to the shape of the cultural-architectural products, on one hand, and with its content on the other, and stands for one of the ways through which we can interpret the architectural product with its metaphysical reality that has resulted from the non-material world and the physical resulting from the material world.

The architectural prototype is a cultural concept for expressing the cultural thoughts and beliefs which are embodied in the cultural-architectural product because the architectural prototype represents a link between:

- First: related to the mental - metaphysical - products of man that can be classified as one common species amongst certain cultural group.

- Second: related to the material - physical - products of man that can be classified as one common species amongst certain cultural group.

The architectural prototype is a language whose vocabularies are embodied physically in a system that possesses basic vocabularies and constructional rules embedded in the mind and it has elements of formation which represent the cultural structures of the society and translate its basic signifier values which are represented by:

The Collective Memory: The cultural products are influenced by the psychological concept represented by the collective memory and collective unconsciousness. The strength of cultural products lies in their psychological dimension. Cultural products are concerned with the memory that exists within the culture and the human, which is called the collective unconsciousness, as they relate the cultural group with the constants of their culture which are historically continued.

The Mental Desire: The cultural products are influenced by the psychological concept represented by the sensual motivation and the mental desire. The strength of cultural products lies in their psychological dimension. Therefore, cultural products are concerned with the sensual motivation that dominates the thinking and the product of a certain culture and they form the base in the characteristics of its products.

The Supreme Cultural Ideal: The cultural products are influenced by the psychological concept represented by the supreme cultural ideal. The strength of cultural products lies in their psychological dimension. And cultural products are concerned with the cultural supreme ideal which emerges from various biological aspects related to human evolution aspects, events, and different historical and social circumstances that are related to the evolution of the society. All this contribute to

make the cultural supreme ideal rich and dominant over the social philosophical traditions of the culture.

The Spirit of the Age: The conscious and unconscious cultural product will stimulate the society towards forming the supreme ideal. It possesses cultural dimensions that form the values of the spirit of the age and it is the base of the emergence of the cultural product. Societies vary in terms of what reflects the spirit of the age in them and this can be called the great cultural drive in accordance with the cultural will.

The signifier values are related with the relationships that emerge amongst the symbols which stand for certain cultural values and their explicit and implicit meanings. Therefore, the signifier values are a reflection of the existential dimensions of a culture, i.e. the attitude of any man towards his relationship with himself, which can be identified in the structures constituting the great cultural drive, because each culture has its own private structures which are different from each other.

Diagnosing the cultural structures of the society will lead us to the signifier values of the architectural prototype and that fulfills the first level of the architectural prototype system.

These signifier values of the architectural prototype are translated in formal relationships, which stand for the signified values of the architectural prototype. So, the signified values are related with what represents the relationships that emerge between the symbols that express certain cultural values and their explicit and implicit meanings. These are:

The Whole - Part: Represents the human point of view concerning the origin of the relationship between himself and the universe that surrounds him.

The Public - Private: Represents the human point of view concerning the sequence of the relationship between the holy and unholy aspects between himself and the universe that surrounds him.

The Mass - Void: Represents the human point of view concerning the nature of the relationship between the material and immaterial between himself and the universe that surrounds him.

These relationships as a whole constitute the signified values of the architectural prototype represented by:

The Cultural Species: Its essence is not visible and it is embodied as visible in the physical world. The cultural species is considered the natural equivalence of the cultural spirit of the age within the system of the architectural prototype and it forms the view of the human towards forming his cultural product through his view to the system concept, where the system lies in nature in an organic way, but the human doesn't understand this system unless it is within abstract geometrical frameworks. So, we find the system added on the general formation organization of the cultural product following the existential dimensions of the culture. So, abstraction is one of the most influential means in conveying and communicating the meanings, as it represents the early attempts of the human concerning the nature dominion, making them suitable for his needs and his uses and satisfactory to his desires. Abstraction was also defined as representing the things man chooses from the nature so that they enlighten and ignite the speculations and the unconscious of his perceptions and his knowledge. So, he - the human - moves to the world of queries, the essence of things, their origins and the reasons behind them.

The Main Regulating Lines - Lineaments: They embody, in an abstractive way, the artistic, cultural and architectural formation. They are the primary source that

includes the presumption structures of the cultural product form through the projection of function, scale and focus on the abstract system of the coordinates by means of:

- § Diagnosing the core of the formation.
- § Diagnosing the joints of the formation.
- § Diagnosing the structure of the formation.

The process of diagnosing of the structures of forming the artistic, cultural and architectural product will lead us to the signified values of the architectural prototype and that accomplishes the second level of the architectural prototype system.

The architectural prototype system is integrated through the overlapping of its two levels. So, the architectural prototype is not a product of architectural innovations whose emergence is a result of new material and technologies as the latter is one of the physical elements of formation or what is called the repeated spatial-temporal model for forming the style. Consequently, the architectural prototype represents the basic abstract level of the cultural product and is embodied physically in the architectural model. It is manifested through several levels: the part, parts and the whole. Therefore, the physical formation, which is called the model, if repeated in a certain time and place, it will produce the style.

The fundamental vocabularies of the architectural prototype and its structural are emerged from the values and components of the cultural environment. The most prominent components are:

- § The existence of a cultural and intellectual unity, because the architectural prototype cannot grow within the intellectual diversity and cultural conflicts.

- The new architectural prototype should come to the surface by means of new addition, not on the materials and techniques levels only, but on the level of intellectual addition that is reflected on the cultural - architectural product.

If these cultural changes, developments and additions which are spatially-temporally identified, create the styles, the existential dimensions, embedded in the human, and which are emerged from the particularity of time and place, they are the ones which accomplish the architectural prototype.

From all this we find studying the architectural and cultural product through history should pass through the gate of the architectural prototype, where:

- The system of architectural prototype can be adopted as a means to study the cultural characteristics of a certain culture or art through history, or adopted as a basic and important system for studying the cultural - architectural origin, rooting and interconnected as they are based on discovering the common base in the shape for the cultural and architectural product.
- The system of style cannot be adopted as a tool to study the cultural characteristics of a certain architecture or art through history, nor as a basic and important system for studying the cultural - architectural origin, rooting and interconnected as the post-modernist architects did through the formal reuse of styles via historical signs and symbols, because that requires discovering the common base in the shape of the cultural and architectural product. New details might be invented and start to express new styles but their intellectual base remains as it is just like in the style of the renaissance, baroque and rococo as they all possess one formal abstract source which is represented by their architectural prototype.

§ The system of the architectural prototype can be adopted as a tool to study the cultural characteristics of a certain culture or art over history, or as a basic and important system for studying the cultural - architectural origin, rooted and interconnected because it is connected with the symbolic architectural and cultural products which reflect the notion of continuity. Hence, the importance of the symbolic architectural and cultural products as a reference, because the physical reality of these products is considered the starting point, the material information of the analysis and the context within which any cultural product is made regardless its scale characteristics, its function or its style. The symbolic cultural - architectural products remained -whether we accepted them or not- continuous to remind us of our origins and the relationship of these origins with our sense with place and time and our tendency to distinguish our history through the language of geometry.

5.2.2. The Special Conclusions

5.2.2.a. The Core of the Mesopotamian Culture

The culture of Mesopotamia is a vivid and active one and its distinguished cultural environment contributed to its birth and the formation of its ingredients. It must be emphasized that the same ingredients were able to preserve its cultural products of art and architecture. The origins of the Mesopotamian artistic and architectural cultural products could remain alive and effective by means of their cultural core which is represented by its Mesopotamian myth.

And myth refers to the human desire in maintaining a kind of the collective memory, which makes his existence in this world full and meaningful, because the short period a human lives - his life - is not suspended in space, but a point in along

and purposeful context preserved by the myths. Therefore, myths provide man with a historical memory that makes him feel that his life has a justified existence.

What makes the mythical collective memory distinctive from the other collective memories created by history is the content of each of them. Mythical history doesn't pay attention to anything other than the events resulting from the interrelation of the worlds of Gods and human. It ignores the ordinary worldly events regarding them unworthy to be collected, preserved and recalled. If an event or a character happened to immortalize in the memory, that will only come through making it a legend and promoting it from the level of reality to the mythological event level. From all the Mesopotamian kings, Gilgamesh, the king of Uruk, is the only king who was preserved in the memory and who was immortalized by the myth and not by history, because the historical persons and events do not deeply root in the collective memory of man but for a short time and then they vanish and change as a result of the myth.

So, the myth is not merely a narration of a symbolic story, because it is a garment carefully chosen by the savage mind for the abstract. So, the mythological image cannot be separated from the thought. It represents the shape in which the experience became conscious. Therefore, we should take the myth seriously because it reveals an important fact, although it is difficult to be discovered; a fact that we can call metaphysical. Moreover, the myth is a kind of poetry that sublimes over the poetry that declares a certain fact; a kind of mental explanation that transcends the ordinary explanation in that it aims at the events of the truth it announces; a kind of deed that cannot be accomplished with the same deed but should declare and expand a poetic form that belongs to the truth forms.

This discovery shows that we cannot reach it without severe difficulty, because we are, with our civilized nature, cannot perceive or understand the poetic nature of the primary human without a great deal of effort. And this establishes the principle of the authenticated truth which says that what man truly acknowledges and what he says is identical.

The Collective Memory: The Mesopotamian myth constituted a point of view for the man of Mesopotamia concerning the universe and existence. That was reflected by the collective memory and collective unconsciousness towards what he considered to be the most important aspect in the universe, i.e. the concept of death. The man of Mesopotamia is pessimistic in nature and he realizes that his life is not immortal, so he remains pessimistic concerning his destiny after death. Death, for him, doesn't mean the transition into a perpetual world, but means the transition to the world of darkness, and fog; a world in which his worldly deeds won't mediate to him. The only thing that mediates is what he seeks to accomplish and what offers to himself in the world.

The Mental Desire: The Mesopotamian myth constituted a point of view for the human of Mesopotamia concerning the universe and existence. That was reflected by the sensual motivation and the mental desire towards nature, because nature is considered a mysterious world by the man of Mesopotamia, a world that cannot be trusted. He viewed the four seasons as the circle of death and the returning of life to the nature. For him it was a gloomy and mysterious drama. In winter everything goes back to the sources of darkness; to the womb of the earth-the mother; and in spring life is emitted again. That really affected his conception about the concept of life and death which is a concept that depends on the instability of things and their continuous cycle in decomposition and extinction. So, he was keen on being closed and the

degree of his openness to the nature reflects the transformation in his view and attitude with nature and the growing confidence in his strength and power.

The Supreme Cultural Ideal: The Mesopotamian myth constituted a point of view for the man of Mesopotamia concerning the universe and existence. That was reflected by his view to the existence through paying attention to the essence and ascending from the materialistic values to the immaterial ones. So, his view to the existence resulted in a kind of relationship between him and what he considered as the supreme cultural ideal. The supreme cultural ideal cannot be contained within a certain material form and cannot be represented spatially-temporally in accordance with a certain function or a scale. And according to that, the human of Mesopotamia didn't see the cosmic system as something that was donated, but as something that was accomplished, and it was achieved with a continuous assembly of many individual cosmic wills.

He - the human of Mesopotamia - considered the cosmic universe as a system of wills, and that the new wills are stronger than the older ones, as mentioned in the myth of the creation when the God of the air begot his son the Moon, which in turn begot the Sun which is more brilliant.

The Spirit of the Age: The humans of Mesopotamia considered the myth is the soul that directs all the cultural feelings whatever their nature and forms were different, like seeking the optimum through the process of discovering the secret of existence. This endeavor - seeking - is immaterial and material in which time mixes with the place. Therefore, the ultimate goal of the mythical thinking is the permanent structures which suit with which conscious and unconscious individual and collective actions of the human adapted with the mental and cultural desire and acquire its ultimate nature from it. The mystical plays a complex role, and it is the main and the

most common aspect. So, the man of Mesopotamia sees that there is no action that is void of sacredness. So, he reproduces his cultural, artistic and architectural models continuously because it is a fact that never perishes.

5.2.2.b. The Mesopotamian Architectural Product

The Mesopotamian myth of creation is the primary soul dominating all the different products and there is strive towards the optimum by means of the process of discovering the existential secret. This concept, in which time mixes with the place, was characterized by the idea of creating the common cultural species, because the civilization of Mesopotamia, with its two cultures (The Sumerian -Akkadian and The Babylonian - Assyrian) reflected the myth of creation as a core of the cultural product in its artistic and architectural products. The sacred imagination in the Mesopotamian culture is not a stylistic ornament only, but a portraying of the cosmic principles that don't perish, in their opinions.

So, with regard to the collective conscious, we find that the humans of Mesopotamia didn't pay attention to the private architectural products, nor the architecture of tombs, because they believed that this world is inevitably transient. But concerning what is related to the mental desire, this was embodied in the type of their products built with clay and adobes which is -the clay- is the sacred material that can be easily vanished, so this material is revived again by adding a new layer of clay to fix the defects, while we find that the supreme cultural ideal embodied in the emergence of the cultural, symbolic and monumental products.

The human of Mesopotamia believes that the residence of God is the sky and the God chooses certain locations on the earth for his residence. As the Mesopotamians were characterized with worshiping multiple Gods, we see that every

city has its own God, and the main God emerges in addition to the secondary Gods, while the king in Mesopotamia was not the God, but a representative of the God who was chosen by the God himself. They believed that their Gods don't stand for perfection but the will of existence. Therefore, the Mesopotamian cultural and architectural product was characterized by the cultural core: the temple and the palace. The temple stands for the spiritual values of the Mesopotamian society; and the emergence of the palace as a new cultural model indicates the beginning of the transformation in the intellectual structure and the existential values of man. All this can be summarized in two stages:

- First: The ruler or the king is the religious and the secular ruler and he used to be called the priest king. His role is to organize all the life affairs in addition to his religious role. So, we find the temple and the palace are merged.
- Second: The separation between the religious and the worldly ruler. So, there become two centers, one of which is religious and the other is secular.

In expressing the universe and man and the relationship between them, the Mesopotamians adopted that as the geometrical relationships in the shapes that the Mesopotamian formulated, in accordance with the Whole - Part, Public - Private, and Mass - Void relationships, which perform another function other than the literal - simulation relationship of the reality, a religious function that embodies the structures of the creation myth which is represented by:

- The Structure of the Origin.
- The Structure of the Evaluation.
- The Structure of the Organization.

The mythical structures represent the existential dimensions of man. So, they represent the signifier values of the architectural prototype in the culture of

Mesopotamia, which are reflected in certain values, which are the signified values of the architectural prototype and are translated in the architectural product through making the simplest possible enabled abstractions all the way to the primary and common bases, rules and principles in his experiences and his perceptions.

These characteristics distinguished man from the other creatures as having an ability to exclude unessential additional details. This abstraction led to the theory and this theory enabled us to be aware of things and their essence, then defining them and interpreting them. Such abstractions have been related, since ancient times, with the ability to simplify things visually, and which denotes the early attempts of man to impose a simplified geometry with main regulating lines on his cultural product which is based on:

- Diagnosing the core of the formation.
- Diagnosing the joints of the formation.
- Diagnosing the structure of the formation.

This enabled them to establish geometrical steps in order to generate extremely accurate cultural products, which revealed the distinction of the Mesopotamian cultural - architectural product which rests on the embodiment the Sumerian - Akkadian creation myth from the Mesopotamian cultural and architectural product which rests on the embodiment the Babylonian - Assyrian creation myth, where:

1. The Structure of the Origin: Double - Single Versus the Core of the Formation: Whole - Part:

The Sumerian - Akkadian myth of creation differs from the Babylonian - Assyrian one in looking at the structure of the origin which is related to definite mythical concepts, represented by the belief of monism of existence for the

Sumerians - Akkadians, and the duality of existence for the Babylonians - Assyrians. So, it can be said that:

The focus of the Sumerians - Akkadians on the domination of the whole reflected their belief in the monism of the existence and the multiplicity of the universe levels. So, the complete system of the product is composed of the secondary systems with a considerable attention to the correlation between the secondary systems. So, the main whole dominated the secondary parts within clear relationships in accordance with importance.

This relationship is manifested even in the prevailing regime, which is the system of city states, each of which has its own king, boarders and special system.

The focus of the Babylonians - Assyrians, in their cultural product, on the balance of the whole and the part, expresses their belief in the dualism of existence and in the unity of the universe levels. So, there emerged the complete system of the product, which is composed of the secondary systems - subsystems - paying attention to the correlation between the subsystems. So the whole balanced with the secondary parts within clear relationships according to importance.

This relationship is very clear even in the prevalent regime of the king, i.e. the united empire which unified all the cities and which has its own king, boarders and unique regime.

In spite of that we see that there is a unity in the concentration of Sumerians - Akadians and Babylonians - Assyrians that the dominance was for the complete whole and not the partial in general, and that the gradation begins from the whole towards the part.

2. The Structure of the Evaluation: Holy - Unholy Versus the Joints of the Formation: Public - Private:

The Sumerian - Akkadian myth of creation differs from the Babylonian - Assyrian one in its view to the evaluation structure which is related to specific mythical concepts represented by the belief in the domination of the holy spiritual essence of the cosmic system over the unholy in it or the domination of the holy for the Sumerians - Akkadians. But for the Babylonians - Assyrians, they believe in the balance of the holy spiritual essence of the cosmic system with the unholy in it or the balance of the holy. So, it can be said:

The focus of the Sumerians - Akkadians on the domination of the Private instead of the Public in their cultural products temples and palaces came as a reflection of the belief of the domination of the holy spiritual essence of the cosmic system over the unholy in it or the domination of the holy. So, the complete system of the product emerged, that which is composed of subsystems in addition to paying attention to the relatedness between the subsystems, then the domination of the main private over the general secondary within clear relations in accordance to importance.

The focus of the Babylonians - Assyrians on the balance of the Private with the Public in their cultural products temples and palaces came as a reflection of the balance of the holy spiritual essence of the cosmic system with the unholy in it or the balance of the holy. So, the complete system of the product emerged, which is composed of subsystems in addition to considerable attention to the relatedness between the subsystems, then the balance of the main private with the public secondary within clear relations according to importance.

In spite of that, we find that there is a unity in the concentration of the Sumerians - Akkadians and Babylonians - Assyrians; that the view, direction and the path should be towards the private -inside- and not towards the public - outside - in general.

3. The Structure of the Organization: Body - Soul Versus the Structure of the Formation: Mass - Void:

The Sumerian - Akkadian myth of creation differs from the Babylonian - Assyrian one in its view to the organization structure which is related to specific mythical concepts, represented by the belief in the material essence of the holy or the holiness of the body for the Sumerians - Akkadians offset by the view of the Babylonians - Assyrians which is represented by the belief in material - immaterial essence of the holy or the holiness of the body and the soul. So, it can be said:

The focus of the Sumerians - Akkadians on the domination of the mass instead of the void in their cultural products temples and palaces came as a reflection of the belief of the material essence of the holy or the holiness of the body. So, the complete system of the product emerged, which is composed of subsystems in addition to paying attention to the relatedness between the subsystems, then the domination of the main mass over the secondary voids within clear relations in accordance with the importance.

The focus of the Babylonians - Assyrians on the balance of the mass with the void in their cultural products temples and palaces came as a reflection of the immaterial - material essence of the holy belief or the holiness of the soul and the body. So, the complete system of the product emerged, which is composed of subsystems in addition to considerable attention to the relatedness between the

subsystems, then the balance of the main mass with the secondary voids within clear relations in accordance with the importance.

In spite of that we see that there is a unity in the concentration of Sumerians - Akkadians and Babylonians - Assyrians that the dominance was for the complete mass and not for the partial void in general, and that formation in general is solid and closed.

4. Formal Organization:

The Sumerians - Akkadians are ideal experimentalists. The Sumerian - Akkadian ideal experimental direction was toward adding the geometrical system to all that immortalizes the holy in their cultural - architectural product. The formal processing which begins by the experiment crystallizes and develops in accordance with the requirements of the time. So, we find them having orientation to the ideal experimental values.

The Babylonians - Assyrians are ideal rationalists. The Babylonian - Assyrian ideal rationalists' direction was toward adding the geometrical system to all that immortalizes the holy in their cultural - architectural product. The formal processing is stable in spite of time changes. So, we find them having orientation to the ideal rationality values.

In spite of that, we find a harmonious similarity that denotes the Mesopotamian cultural - architectural product the cultural uniqueness, which is the ideal view to the Sumerian - Akkadian experimentalism and the Babylonian - Assyrian rationalism which resulted in using the ideal basic shapes and the most important of these shapes is the circle. Although the Sumerians and the Akkadians didn't use these values on the part level, just on the whole level, the Babylonians and the Assyrians used them on the whole and part levels.

The Mesopotamians devised the shape from the circle, which is a metaphysical dogma for the unity of the existence source. Therefore, the Mesopotamians scrutinized all the shapes related to the circle within its purer form in addition to its hidden presence within the relationship of harmony between the whole and the parts. If that is considered, we can see the Mesopotamians could make formation inside the different elements of the architectural - cultural product.

The circumvolution of the line produces the circle. And because it doesn't have a beginning or end, it symbolizes immortality and perpetuation and from the circle all the shapes evolve. The principle of abstraction and harmony with the universe appears in this circular geometry. It is considered as the regulatory principle for the Mesopotamians, which is considered as the base for the laws of creation and genesis and this in turn, emphasizes the fact that the Mesopotamian cultural-architectural products relied on the main regulating lines. So, the analysis should be geometrical, where using the numeric-linear scale in analyzing the architectural product could involve incredible numbers, ancient civilizations could never deal with.

The abstract process of calculating the numbers and mathematics were not available as we understand them now. The Mesopotamian artist and architect found, through applying geometry, the optimum method of areas formation without resorting to complex mathematical calculations, like those used after developing mathematics - the decimal system -, on which they should be based on the circle and its divisions. That enabled the Mesopotamians artist and architect to create freely and correctly without the complications of the numerical system. Therefore, several internal and complete relationships concerning the whole and the part were discovered within the formation disregarding the scale expressions. We see that the

central organization is clear; the city center is the temple and the palace - Temenos**.** For the temple, the cella is the center and the center of the palace is the throne room. All that rests on the attempt to create a basic spatial image which initially aims at deepening the role of the central or the main parts in the architectural product, such as glorifying the God in the temple and aggrandize the role of the king in the palaces and magnifying the domination of the urban focus - Temenos - in the urban scene.

5.3. The Final Conclusions of the Study

5.3.1. Final Conclusions of the Theoretical Framework

The previous special studies in chapter one provided the basis for identifying the general problem of the study, while the general previous studies in chapter two provided the basis for identifying the stages of finding a solution for the general problem of the study by means of identifying the main architectural structures of the prototype represented by Essence - Source and Language - Grammar of the prototype, although it doesn't crystallized it with the form shown by the study. The previous general studies varied in their presentation and divisions, and they were the raw material of this study in terms of determining the structures of the architectural prototype. Despite the fact that the both previous special and general presentations crystallized essential vocabularies that help identify the main structures of the architectural prototype, but they haven't shown the mechanism in measuring those vocabularies in terms of the connection of the vocabulary with a number of variables that, in turn, determine the nature of the prototype system.

The theoretical framework of this study provides a basis that can be used in analyzing the cultural product on any civilization, by means of using the items

adopted in the study and the aspect presented in the procedural definition of the architectural prototype system in architecture in general in which the study identified its theoretical framework.

The procedural definition presents the main aspects related to the architectural prototype in architecture generally, and as follows:

The architectural prototype forms the constructional basis of the internal system of the cultural product, relying on certain structures of the shapes formations of the cultural products, and consequently confirming the cultural identity in terms of the basis of the structures on interacting elements in which the intellectual attitude of the civilization represents an essential factor.

The architectural prototype produces the cultural species that gives an infinite number of models depending on the method in which the formation element are organized by means of the main regulating lines-lineaments which identify the basic elements of formation in all its levels.

5.3.2. Final Conclusions of the Practical Study

The Mesopotamian civilization is an active and a living civilization and the facts of its distinguished cultural environment contributed to its emergence and it should be asserted that the components of its emergence are the same components that could preserve its cultural, artistic, and architectural products.

The facts that the Mesopotamian cultural products represented an important basis for determining its cultural character, as they stood for something in common and a permanent feature for the Mesopotamian cultural products in general and for its architecture in particular that exceeded time and place were represented by the Mesopotamian myth of creation.

The Mesopotamian cultural products involve the similarity with the natural systems which include the Mesopotamian individual's vision and thoughts towards the universe and existence represented by the Mesopotamian myth of creation which was reflected in the structure which involves a focus on the notion of the generating primary part, as the part reflects the image of the whole and vice versa, i. e. the artist then aimed at getting along with certain priorities which are derived from his vision to the existence consciously and unconsciously.

The rules that controlled the Mesopotamian cultural products were rarely written as applying them is embedded implicitly in the nature of the product especially architecture. So, preserving the architecture which is transforming, contemporary and consistent with its previous biography cannot be done unless we identify the roots so the architectural memory will not be lost. In all the traditions of innovation in architecture there are always reliable means to preserve the architectural memory either as a written rules through rituals of the formation of the cultural product or via means that couple architecture with another arena of the civilization which seems to be more permanent than architecture itself.

So, the Mesopotamian architects resorted to certain techniques and manners using different mechanisms in order to create a correspondence between the signifier and the signified. In other words, the integration of the sensed signifier, which is connected to immaterial aspects and lies within the core of the cultural product represented by the Mesopotamian myth of creation, with the tangible signified, is related to the material aspects in the cultural products represented by the artistic and architectural models.

5.3.3. The Recommendations of the Study

The study attempted to highlight an important aspect of the formulating an architectural theory that relies on the architectural perspective - environment in general and through the concept of the notion of the prototype, which formed the cognitive basis that has been adopted to remove the ambiguity which encompasses the originality of the Mesopotamian cultural products in particular.

So recommendation of the study will be submitted to all who are interested in contributing in this subject through:

5.3.3.a. Recommendations Related to the Cognitive and Theoretical Framework

First: Is the possibility of adopting the proposed theoretical framework and the analytical system - the prototype system - in the study in order to detect the roots and the origins of the cultural products in arts and architecture in the different civilizations and for various historical stages according to the following order:

- The Earliest Civilization.
- The Egyptian Civilization.
- The Persian Civilization.
- The Greek Civilization.
- The Roman Civilization.
- The Islamic Civilization.

Where;

The research recommends the necessity of studying the cultural historical products by searching the established formatives, especially those from which the product of intellectual - theoretical - and the material - Application - away from the

physical simulation of the product, because the physical simulation of human action always remains in doubt, so we should always refer to the intellectual roots, so this kind of study will give us the view on the nature of turning theory into reality and this will help in maintaining the general framework of the science of history of architecture and its sequence from the risk of distortion must be done through:

- § Employing the different knowledge fields such as philosophy, psychology, and anthropology.
- § Employing the different artistic fields such as calligraphy, music, and other architectural fields.
- § The research recommends the necessity of classifying other natural, social, economic, or cultural variables concerning the construction of the architectural prototype.
- § The research recommends the necessity of adopting the theory - strategy - of the architectural prototype mechanism within the methods of the architectural design considering it as a strategy that aims at connecting the past with the present on scientific basis.

Second: The basic complementary stage of this investigation is the study of the identity, particularity, and communication of the cultural products in arts and architecture in different civilizations and for different historical eras. So,

- § The research recommends the necessity of studying the cultural products in arts and architecture in the various civilizations as a natural extension to the ones that were before them.
- § The research recommends the necessity of studying the modern architecture - the current architecture - in the light of the cultural origins of its artistic and architectural products.

- § The research recommends the necessity of studying the particularity of architecture in terms of the neighboring knowledge by discovering the interrelated boarders in order to manifest the limitations of benefit from their concepts, mechanisms, and their methodologies such as psychology and anthropology.
- § The research recommends the necessity of finding the architectural problems each cultural environment in particular suffers from, in order to study and understand them as a first step to the solution without having them involved in other environmental problems and copying their solutions without understanding their intellectual implications.
- § The research recommends further study of the cultural and architectural product from original perspective and not to follow the previous propositions and decisions on condition that the methodology used should be based on the information of the thought and the product of the civilization in the period of its formation i.e. age facts in which grew up in, and not based on the age facts in our time.

5.3.3.b. Recommendations Related to the Professional and Practical Framework

First: Is reviving the importance of the perspective - environment - cultural in formulating the architectural theory that forms the cultural cognitive basis of the theoretical methodologies and the history of architecture for the scholars in the field of architecture, and manifesting its importance in identifying the attitude towards history and the architectural heritage. In recent years the awareness for the architects in general and the students in particular decreased in terms of the importance of the

perspective - environment - cultural considering it inconsistent with the current spirit of the age - Globalization - whose most important pillars depend on the alienation from identity and cultural particularity. Consequently, a new spirit emerged, which rests upon believing in the capability of creating a new architectural theory which is suitable for any time and place without realizing that any theory requires a cultural and cognitive base and that the perspective - environment - cultural is the most important pillars of this cultural and cognitive base.

Second: Is reviving the importance of the perspective - environment - cultural in formulating the architectural theory that forms the cultural cognitive base of the theoretical methodologies and the history of architecture for the scholars in the field of architecture, and constructing a comprehensive view for all the aspects of the Mesopotamian architecture and the necessity of reconsidering the western writings and presentations as well as emphasizing not relying on these presentations as axioms beyond dispute. On the contrary, many of these presentations can be considered as starting points in terms of important aspects in the Mesopotamian history of architecture. Consequently, we will not allow the western perspective to interpret Mesopotamian cultural product by infiltrating into our methodologies and reevaluating the methodologies adopted in accordance with a new perspective that believes in the originality of the cultural and architectural in Mesopotamia, away from the precipitations and accumulations of the orienalists and other western scholars who analyze the Mesopotamian cultural product according their narrow subjective view and those who will produce a legacy that is encircled with ambiguity and confusion. It also requires reevaluating many researches, studies, and literature of the orientalists, which tackled the Mesopotamian cultural products in different ages and evaluates their research topics.

So,

- The research recommends the necessity of encouraging the cooperation between the various specializations especially architects, anthropologist, and archaeologists which are interested in the cultural products in general and the civilization of Mesopotamia in particular in all the relevant fields such as excavation, documentation, interpretation, and analysis with logical and scientific methodologies that will help these specializations to interpret and reemploy these cultural products intellectually and symbolically that extend for thousands of years in the various ages.
- The research recommends the necessity of encouraging to make use of the international programs on the level of UNESCO and other relevant organizations and institutions to fund this kind of researches and studies as well as encouraging publication of such studies. So the human library would include the literature that tackles the important chapters of the cultural products in general and the civilization of Mesopotamia in particular from a logical and objective point of view.

In the end I find myself trying to emphasize the following:

Many presentations and concepts in the history of cultural products in general and the civilization of Mesopotamia in particular, which are relied upon as axioms beyond dispute, are in fact dependent on a narrow subjective point of view. They don’t reflect the complete reality, but the author's attitude and his extreme personal opinion mostly. So, it is our duty as researchers, specialists, and as people who are interested in the history of architecture to consider the issues objectively and comprehensively before we accept the information, presentations, and interpretations

submitted to us. We can say that even the objective western researchers face as a barrier when they study the Mesopotamian civilization that results from being stranger to this civilization and being unaware of its reality, roots which results in incomplete understanding and in exaggeration sometimes and indulgence in the conceptions of ambiguity and riddles that may also deal with the Mesopotamian civilization as if it belonged to people who were gone with history.

5.3.4. The Future Studies

- A study of the philosophical concept in the Mesopotamian cultural and architectural product in general and other civilizations in particular.
- A study of the anthropological concept in the Mesopotamian cultural and architectural product in general and other civilizations in particular.
- A study of the cultural communication concerning the works influenced by Mesopotamia civilization through the concept-idea of the architectural prototype.
- A comparative study of the concept-idea of the architectural prototype in the cultural and architectural product of the different civilizations.
- A study of the cultural roots of the cultural and architectural product of the different civilizations in general.
- A study of the formational structure of the cultural and architectural product of the different civilizations in general.
- A study of the particularity of the individual and the society for the cultural and architectural product of the different civilizations in general.
- A study of the validity tree of the cultural and architectural product of the different civilizations whose tree is doubted.

- A study of the experimental trends versus the rational trends of the various cultural and architectural products of the different civilizations in general.

5.3.5. The Beneficiaries of the Study

- The relevant governmental offices.
- Local and international museums.
- Local and international libraries.
- The general boards of heritage and archaeology in Iraq and the world.
- Consultative public and private authorities and bureaus.
- Public and private research and study centers.
- Colleges, schools and departments of architecture.
- Colleges, schools and departments of history.
- Colleges, schools and departments of anthropology.
- Colleges, schools and departments of archaeology.
- Artists and architects.

تم بعونه تعالى

FOOTNOTES

1. **Socrates:** The Greek Athenian philosopher, credited as one of the founders of western philosophy, he is an enigmatic figure known chiefly through the accounts of later classical writers, especially the writings of his students Plato and Xenophon, and the plays of his contemporary Aristophanes. Many would claim that Plato's dialogues are the most comprehensive accounts of Socrates to survive from antiquity (Kofman: 1998).
2. **Jacques Derrida:** The French philosopher, born in French Algeria. He developed the critical theory known as deconstruction and his work has been labeled as post-structuralism and associated with postmodern philosophy (Vincent: 1996).
3. **Vitruvius:** (c.80-70B.C. c.15 B.C.) who was a Roman writer, architect and engineer, active in the 1st century BC. He is best known as the author of the multi-volume work De Architectura ("On Architecture") (Le Bohec: 2000).
4. **Culture:** (Latin:cultura) The word "culture" is most commonly used in three basic senses: excellence of taste in the fine arts and humanities, also known as high culture, an integrated pattern of human knowledge, belief, and behavior that depends upon the capacity for symbolic thought and social learning, the set of shared attitudes, values, goals, and practices that characterizes an institution, organization, or group (Donald: 1971).
5. **The Mental World:** Is an ontological category in metaphysics, populated by nonmaterial mental objects, contrasted with the physical world of space and time populated with Plato's world of ideals (Lloyd: 2008).
6. **Anthropology:** Is the study of humanity. It has origins in the humanities, the natural sciences, and the social sciences. The term "anthropology" is from the Greek anthrōpos, "man", understood to mean mankind or humanity, and -logia, "discourse" or "study", and was first used in 1501 by German philosopher Magnus Hundt (Wolf: 1994).
7. **Iraq:** The Arabic name العراق al- Irāq has been in use since before the 6th century. There are several suggested origins for the name. One dates to the Sumerian city of Uruk (Biblical Hebrew Erech) and is thus ultimately of Sumerian origin, as Uruk was the Akkadian name for the Sumerian city of Unug, containing the Sumerian word for "city", URU. According to

Professor Wilhelm Eilers, "The name al-ʻIrāq, for all its Arabic appearance, is derived from Middle Persian erāq for lowlands". Mesopotamia has always been called "the land of Iraq" in Arabic, meaning "the fertile" or "deep-rooted land" (Declaration of Principles for a Long-Term Relationship of Cooperation and Friendship Between the Republic of Iraq and the United States of America: 2007).

8. **Modern Movement:** Modernism, in its broadest definition, is modern thought, character, or practice. More specifically, the term describes the modernist movement, its set of cultural tendencies and array of associated cultural movements, originally arising from wide-scale and far-reaching changes to Western society in the late 19th and early 20th centuries (Lewis: 2000).
9. **Post-Modernism:** Is a philosophical movement away from the viewpoint of modernism. More specifically it is a tendency in contemporary culture characterized by the problem of objective truth and inherent suspicion towards global cultural narrative or meta-narrative (Jameson: 1991).
10. **The Experimentalism:** Is a theory of knowledge that asserts that knowledge comes only or primarily via sensory experience (Baird& Kaufmann: 2008).
11. **Rationalism:** Is "any view appealing to reasons a source of knowledge or justification (Zafirovski: 2007).
12. **Epistemology:** (from Greek (epistēmē), Meaning "knowledge, science", and (logos), meaning "study of") is the branch of philosophy concerned with the nature and scope of knowledge (Encyclopedia of Philosophy: 1967).
13. **Historicism:** Is a mode of thinking that assigns a central and basic significance to a specific context, such as historical period, geographical place and local culture (Kahan: 1997).
14. **Marxism:** Is an economic and sociopolitical worldview and method of socioeconomic inquiry that centers upon a materialist interpretation of history, a dialectical view of social change, and an analysis and critique of the development of capitalism. Marxism was pioneered in the early to mid 19th century by two German philosophers, Karl Marx and Friedrich Engels. Marxism encompasses Marxian economic theory, a sociological theory and a revolutionary view of social change that has influenced socialist political movements around the world (Karl Marx: 1852).

15. **Nostalgia:** The term nostalgia describes a yearning for the past, often in idealized form. The word is a learned formation of a Greek compound, consisting of (nóstos), meaning "returning home", a Homeric word, and (álgos), meaning "pain, ache" (Boym: 2002).
16. **Phenomenalism:** Is the view that physical objects do not exist as things in themselves but only as perceptual phenomena or sensory stimuli (e.g. redness, hardness, softness, sweetness, etc.) situated in time and in space (Danto: 1965).
17. **Beaux- Art:** Whose origins go back to 1648 when the -Académie des Beaux-Arts- was founded by Cardinal Mazarin to educate the most talented students in drawing, painting, sculpture, engraving, architecture and other media (Middleton: 1982).
18. **Bauhaus:** The cradle of modern movement founded by Walter Gropius, bauhaus was a school in Germany that combined crafts and the fine arts, and was famous for the approach to design that it publicized and taught , it operated from 1919 to 1933 (Pevsner: 1999).
19. **Eclecticism:** Is a term used to describe a single piece of work, which incorporates a mixture of elements from previous historical styles to create something that is new and original (Hamlin: 1952).
20. **Christian Revival:** Is a term that generally refers to a specific period of increased spiritual interest or renewal in the life of a church congregation or many churches, either regionally or globally (Armstrong: 1972).
21. **Zeitgeist:** Is the spirit of the times or the spirit of the age. Zeitgeist is the general cultural, intellectual, ethical, spiritual, and political climate within a nation or even specific groups, along with the general ambiance, morals, socio cultural direction, and mood associated with an era. The term is a loan word from German Zeit –time and Geist– spirit (The American Heritage Dictionary of the English Language: 2003).
22. **German Idealism:** Was a philosophical movement that emerged in Germany in the late 18th and early 19th centuries. It developed out of the work of a German philosopher Immanuel Kant (1724 - 1804) in the 1780s and 1790s, and was closely linked both with romanticism and the revolutionary politics of the Enlightenment. The best-known thinkers in the movement, besides Kant, were German philosophers Johann Gottlieb Fichte (1762 - 1814) and Friedrich Schelling(1775 - 1854) (The Encyclopedia of Philosophical Sciences:1817-1830).

23. **Friedrich Hegel:** The German philosopher, one of the creators of German Idealism. His historicist and idealist account of reality as a whole revolutionized European philosophy and was an important precursor to Continental philosophy and Marxism (Butler: 1987).
24. **Periodization:** Is the attempt to categorize or divide time into named blocks. The result is a descriptive abstraction that provides a useful handle on periods of time with relatively stable characteristics. However, determining the precise beginning and ending to any "period" is often a matter of debate (Besserman: 1996).
25. **Heinrich Wolfflin:** (1864 - 1945) Was a Swiss art critic a famous art historian in the 19th century; his presentations and methodology in architecture analysis were the base for several researches and studies in the history of architecture up to the 20th century. In his famous book on the architecture of the Age of Renaissance und Barock in 1888 in which he tackled the problem of styles' development of that period and shedding light on those problems. Translated to English from German in 1946 (Jarzombek: 2000).
26. **Orientalism:** Is a term used for the imitation or depiction of aspects of Eastern cultures in the West by writers, designers and artists, as well as having other meanings. In particular, orientalist painting, depicting more specifically "the Middle East and North Africa",was one of the many specialisms of 19th century academic art (Oxford English Dictionary).
27. **Renaissance Humanism:** Was an activity of cultural and educational reform engaged by scholars, writers, and civic leaders who are today known as Renaissance humanists (Mann: 1996).
28. **International Style:** Is a major architectural style that emerged in the 1920s and 1930s, the formative decades of Modern architecture. The term originated from the name of a book by Henry-Russell Hitchcock and Philip Johnson, The International Style (Hitchcock & Johnson: 1997).
29. **The Renaissance:** (Italian: Rinascimento, French: Renaissance, from ri- "again" and nascere "birth") was a cultural movement that spanned roughly the 14th to the 17th century, beginning in Italy in the Late Middle Ages and later spreading to the rest of Europe (Etymology Dictionary: 2009).
30. **The Baroque:** Is a period and the style that used exaggerated motion and clear, easily interpreted detail to produce drama, tension, exuberance, and grandeur in sculpture, painting,

literature, dance, and music. The style started around 1600 in Rome, Italy and spread to most of Europe (Gardner: 2005).

31. **Rococo:** Referred to as "Late Baroque", is an 18th century style which developed as Baroque artists gave up their symmetry and became increasingly ornate, florid, and playful (Britannica Encyclopedia: 2012).
32. **The Introduction Of Coordinates** by René Descartes and the concurrent development of algebra marked a new stage for geometry, since geometric figures, such as plane curves, could now be represented analytically, i.e., with functions and equations.
33. **Platonism:** Is the philosophy of Plato or the name of other philosophical systems considered closely derived from it (Seyffert: 1964).
34. **Aristotelianism:** Is a tradition of philosophy that takes its defining inspiration from the work of Aristotle (Furley: 2003).
35. **Philosophy of Religion:** Is a branch of philosophy concerned with questions regarding religion, including the nature and existence of God.
36. **The Middle Ages:** Is a periodization of European history from the 5th century to the 15th century, the religious theory and the theological philosophy have dominated peoples' thinking and minds in different aspects of human science, philosophy, arts and literatures (Adams: 2001).
37. **The Bible:** The New Testament is the second major division of the Christian biblical canon (Brown: 1997).
38. **The Torah:** The Old Testament, of which Christians hold different views, is a Christian term for the religious writings of ancient Israel held sacred and inspired by Christians which overlaps with the 24-book canon of the Masoretic Text of Judaism (Bandstra: 2004).
39. **The Age of Enlightenment:** (or simply the Enlightenment or Age of Reason) Was an elite cultural movement of intellectuals in 18th century Europe that sought to mobilize the power of reason in order to reform society and advance knowledge (Wilson & Reill: 1996).
40. **René Descartes:** (1596 - 1650) the French philosopher and writer. He has been dubbed the 'Father of Modern Philosophy', and much subsequent Western philosophy is a response to his writings, which are studied closely to this day (Colie: 1957).

41. **Sir Isaac Newton:** (1642 - 1727) Was an English physicist, mathematician, astronomer, natural philosopher, alchemist, and theologian, has been "considered by many to be the greatest and most influential scientist who ever lived (Oxford Dictionary of National Biography: 2004).
42. **The Natural Sciences:** Are branches of science that seek to elucidate the rules that govern the natural world by using empirical and scientific methods.
43. **The Industrial Revolution:** Was a period from the 18th to the 19th century where major changes in agriculture, manufacturing, mining, transportation, and technology had a profound effect on the social, economic and cultural conditions of the times. It began in Britain, then subsequently spread throughout Western Europe, North America, Japan, and eventually the world (Ashton: 1948).
44. **Cubism:** Was a 20th century avant-garde art movement, pioneered by Pablo Picasso and Georges Braque, that revolutionized European painting and sculpture, and inspired related movements in music, literature and architecture (Green: 2009).
45. **Purism:** Was a form of Cubism advocated by the French painter Amédée Ozenfant and the architect Le Corbusier. Purism rejected the decorative trend of cubism and advocated a return to clear, ordered forms that were expressive of the modern machine age as documented in their 1918 book After Cubism (Ball: 1981).
46. **World War I:** (WWI), which was predominantly called the World War or the Great War from its occurrence until 1939, and the First World War or World War I thereafter, was a major war centered in Europe that began on 28 July 1914 and lasted until 11 November 1918 (Willmott: 2003).
47. **Gothic Architecture:** Is a style of architecture that flourished during the high and late medieval period. It evolved from Romanesque architecture and was succeeded by Renaissance architecture (Bony: 1983).
48. **Semiotics:** Also called semiotic studies or (in the Saussurean tradition) semiology, is the study of signs and sign processes (semiosis), indication, designation, likeness, analogy, metaphor, symbolism, signification, and communication (Atkin: 2006).
49. **Paul Ricœur:** (1913 - 2005) Was a French philosopher best known for combining phenomenological description with hermeneutic interpretation. As such his thought is

situated within the same tradition as other major hermeneutic phenomenologist's, Martin Heidegger (Marcel & Jaspers: 1948).

50. **Millennialism:** (from millennium, Latin for "thousand years") or chiliasm in Greek, is a belief held by some Christian denominations that there will be a golden age or paradise on Earth in which "Christ will reign" for 1000 years prior to the final judgment and future eternal state (the "World to Come" of the New Heavens and New Earth)(Theology Today: 1996).
51. **Classicism in Architecture:** Developed during the Italian Renaissance, notably in the writings and designs of Leon Battista Alberti and the work of Filippo Brunelleschi. It places emphasis on symmetry, proportion, geometry and the regularity of parts as they are demonstrated in the architecture of Classical antiquity and in particular, the architecture of Ancient Rome, of which many examples remained (Clark: 1956).
52. **Collective Memory:** refers to the shared pool of information held in the memories of two or more members of a group, and was coined by the philosopher and sociologist Maurice Halbwachs (Bradshaw: 1995).
53. **Johann Gottfried Von Herder:** (1744 - 1803) Was a German philosopher, theologian, poet, and literary critic. He is associated with the periods of Enlightenment, Sturm und Drang, and Weimar Classicism (Adler: 1994).
54. **Volksgeist:** Is a German loanword for a unique "spirit" possessed collectively by each people or nation. The idea has its origins in the Romantic era and was proposed by Johann Gottfried Herder (Adler: 1994).
55. **Weltanschauung:** is German term, composed of Welt ('world') and Anschauung ('view' or 'outlook') It is a concept fundamental to German philosophy and epistemology and refers to a wide world perception. Additionally, it refers to the framework of ideas and beliefs through which an individual, group or culture interprets the world and interacts with it (Palmer: 1996).
56. **Sir Ernst Hans Josef Gombrich:** (1909 - 2001) Was an Austrian- born art historian. He is the author of many works of art criticism and art history, including The Story of Art, a book regarded as one of the most accessible introductions to the visual arts (Skidelsky: 2009).

57. **Marcus Tullius Cicero:** (106 B.C. - 43 B.C.) Was a Roman philosopher, statesman, lawyer, political theorist, and Roman constitutionalist. is widely considered one of Rome's greatest orators and prose stylists (Rawson: 1978).
58. **Eskimos:** Or (Esquimaux) Peoples are indigenous peoples who have traditionally inhabited the circumpolar region from eastern Siberia (Russia), across Alaska (United States), Canada, and Greenland (Kaplan: 1990).
59. **The Mesopotamian Marshes:** are a wetland area located in southern Iraq and partially in southwestern Iran. Historically the marshlands, mainly composed of the separate but adjacent Central, Hawizeh and Hammar Marshes, used to be the largest wetland ecosystem of Western Eurasia (Muir: 2009).
60. **Aristotle:** (384 BC - 322 BC) Was a Greek philosopher and polymath, a student of Plato and teacher of Alexander the great. His writings cover many subjects, including physics, metaphysics, logic, rhetoric, linguistics and ethics (Ackrill: 2010).
61. **Timeless** means the quality of being eternal, ageless, immortal, or not affected by time. Anachronisms can be regarded as timeless or out of time.
62. **Leon Battista Alberti:** (1404 - 1472) Was an Italian author, artist, architect, poet, priest, linguist, philosopher, cryptographer and general Renaissance humanist polymath (Kelly-Gadol: 1969).
63. **The Ten Books on Architecture:** De architectura (English: On architecture, published as Ten Books on Architecture) Is a treatise on architecture written by Vitruvius and dedicated to his patron, the emperor Caesar Augustus, as a guide for building projects (Art Directory: 2008).
64. **Dynamic Symmetry:** Is a proportioning system and natural design methodology (Hambidge: 2003).
65. **Jay Hambidge:** (1867 - 1924) was an American artist, born in Canada. He was a pupil at the Art Students' League in New York and of William Chase, and a thorough student of classical art. He conceived the idea that the study of arithmetic with the aid of geometrical designs was the foundation of the proportion and symmetry in Greek architecture, sculpture, and ceramics (Hambidge: 2003).

66. **Sacred Geometry:** Is the geometry used in the planning and construction of religious structures such as churches, temples, mosques, religious monuments, altars, tabernacles; as well as for sacred spaces such as temenoi, sacred groves, village greens and holy wells, and the creation of religious art. In sacred geometry, symbolic and sacred meanings are ascribed to certain geometric shapes and certain geometric proportions (Skinner: 2009).
67. **Civilization:** Or (civilisation) Is a sometimes controversial term that has been used in several related ways. Primarily, the term has been used to refer to the material and instrumental side of human cultures that are complex in terms of technology, science, and division of labor. Such civilizations are generally urbanized. In a classical context, people were called: "civilized" to set them apart from "Barbarian" people (The Barbarians), while in a modern-day context, "civilized peoples" have been contrasted with "primitive" peoples (Kung: 2006).
68. **Mesopotamian Nature:** Mesopotamia encompasses the land between the Euphrates and Tigris rivers, both of which have their headwaters in the mountains of Armenia in modern-day Turkey. Both rivers are fed by numerous tributaries, and the entire river system drains a vast mountainous region. Overland routes in Mesopotamia usually follow the Euphrates because the banks of the Tigris are frequently steep and difficult. The climate of the region is semi-arid with a vast desert expanse in the north which gives way to a 15,000 square kilometers (5,800 sq mi) region of marshes, lagoons, mud flats, and reed banks in the south. In the extreme south, the Euphrates and the Tigris unite and empty into the Persian Gulf (Thompson: 2004).
69. **Anthropology:** Is the study of humanity. It has origins in the humanities, the natural sciences, and the social sciences. The term "anthropology" is from the Greek anthrōpos, "man", understood to mean mankind or humanity, and -logia, "discourse" or "study", and was first used in 1501 by German philosopher Magnus Hundt (Wolf: 1994).
70. **Andrew Lang:** (1844 - 1912) Was a Scots poet, novelist, literary critic, and contributor to the field of anthropology. He is best known as a collector of folk and fairy tales (Antonius: 1968).
71. **Wheat:** Is a cereal grain, originally from the Fertile Crescent region of the Near East but now cultivated worldwide (Belderok: 2000).

72. **Death:** Is the permanent termination of the biological functions that sustain a living organism. The nature of death has been for millennia a central concern of the world's religious traditions and of philosophical enquiry, and belief in some kind of afterlife or rebirth has been a central aspect of religious faith (Zimmerman: 2010).
73. **The Epic of Gilgamesh:** Is an epic poem from Mesopotamia and is among the earliest known works of literature. Scholars believe that it originated as a series of Sumerian legends and poems about the protagonist of the story, Gilgamesh king of Uruk, which were fashioned into a longer Akkadian epic much later. The most complete version existing today is preserved on 12 clay tablets from the library collection of 7th-century BC Assyrian king Ashurbanipal. The epic was originally titled in Akkadian Sha naqba īmuru ("He who Saw the Deep") or Shūtur eli sharrī("Surpassing All Other Kings"), the opening words in different versions (Andrew: 1999).
74. **Oceanus:** Ancient Greek: Ōkeanós, was a pseudo-geographical feature in classical antiquity, believed by the ancient Greeks and Romans to be the world-ocean, an enormous river encircling the world (Liddell&Scott: 1858).
75. **A Myth:** Is defined as a sacred narrative explaining how the world and humankind came to be in their present form, within the field of folkloristics. Many scholars in other fields use the term "myth" in somewhat different ways. In a very broad sense, the word can refer to any story originating within traditions (Armstrong: 2006).
76. **A Creation Myth:** Or (creation story) Is a cultural, traditional or religious myth which describes the earliest beginnings of the present world. Creation myths are the most common form of myth, usually developing first in oral traditions, and are found throughout human culture (Leeming: 1994).
77. **Giambattista Vico:** (1668 - 1744) The Italian political philosopher, rhetorician, historian, and jurist. A critic of modern rationalism and apologist of classical antiquity (Fabiani: 2002).
78. **Galileo Galilei:** (1564 - 1642) Commonly known as Galileo, was an Italian physicist, mathematician, astronomer, and philosopher who played a major role in the Scientific Revolution (O'Connor& Robertson: 2007).
79. **Barbarian and Savage:** Are terms used to refer to a person who is perceived to be uncivilized (Webster's New Universal Unabridged Dictionary: 1972).

80. **The Mythology:** The term mythology can refer either to the study of myths, or to a body or collection of myth (Webster's New Universal Unabridged Dictionary: 1972).
81. **Structuralism:** Originated in the structural linguistics of Ferdinand de Saussure and the subsequent Prague and Moscow schools of linguistics. Just as structural linguistics was facing serious challenges from the likes of Noam Chomsky and thus fading in importance in linguistics, structuralism appeared in academia in the second half of the 20th century and grew to become one of the most popular approaches in academic fields concerned with the analysis of language, culture, and society (Blackburn: 2008).
82. **The Savage Mind:** Is an early work written by Claude Lévi-Strauss. It was originally published in 1962 in French with the title La Pensée Sauvage. The English translation appeared in 1966.Lévi-Strauss makes clear that "la pensée sauvage" refers to not to the discrete mind of any particular type of human, but rather to 'untamed' human thought: "In this book it is neither the mind of savages nor that of primitive or archaic humanity, but rather mind in its untamed state as distinct from mind cultivated or domesticated for the purpose of yielding a return.
83. **Claude Lévi-Strauss:** (1908 - 2009) Was a French anthropologist and ethnologist, and has been called, along with James George Frazer, the "father of modern anthropology" (Doland: 2009).
84. **Tristes Tropiques:** A memoir, documenting his - Levi-Strauss - travels and anthropological work, focusing principally on Brazil, though it refers to many other places, such as the Caribbean and India (Strauss: 1955).
85. **Structural Linguistics:** An approach to linguistics originating from the work of Swiss linguist Ferdinand de Saussure, known as a father of modern linguistics (De Saussure).
86. **The Climax:** is the point in the story where the main character's point of view changes, or the most exciting/action filled part of the story. It also known has the main turning point in the story. The climax (from the Greek word (klimax) meaning “staircase” and “ladder”) or turning point of a narrative work is its point of highest tension or drama or when the action starts in which the solution is given (Introduction to Theme-Writing: 1893).
87. **Oedipus Greek:** Oidípous meaning "swollen foot" was a mythical Greek king of Thebes. He fulfilled a prophecy that said he would kill his father and marry his mother, and thus brought

disaster on his city and family. This legend has been retold in many versions, and was used by Sigmund Freud to name the Oedipus complex (Dallas: 1991).

88. **Mesopotamian** Widely considered to be the cradle of civilization, Bronze Age Mesopotamia included Sumer and the Akkadian, Babylonian and Assyrian empires.
89. **Spatial-Temporal** reasoning is the ability to visualize spatial patterns and mentally manipulate them over a time-ordered sequence of spatial transformations. This ability is important for generating and conceptualizing solutions to multi-step problems that arise in areas such as architecture, engineering, science, mathematics and art (Renz & Nebel: 2007).
90. **The Word Temenos** derives from the Greek verb (temnō), "to cut"; plural: temene. The concept of temenos arose in classical Mediterranean cultures as an area reserved for worship of the gods. Some authors have used the term to apply to a sacred grove of trees, isolated from everyday living spaces, while other usage points to areas within ancient urban development that are parts of sanctuaries (Antonaccio: 1995).
91. **A dynasty:** Is a sequence of rulers considered members of the same family. Historians traditionally consider many sovereign states' history within a framework of successive dynasties, e.g., China, Ancient Egypt and the Persian Empire (Thomson: 1961).
92. **A cella:** From (Latin for small chamber) or naos (from the Greek ναός meaning temple), is the inner chamber of a temple in classical architecture (Chisholm: 1911).
93. **The Word Niche** derives from the Latin nidus or nest, via the French niche. The Italian nicchio for a sea-shell may also be involved, as the traditional decoration for the top of a niche is a scallop shell, as in the illustration, hence also the alternative term of "conch" for a semi-dome, usually reserved for larger exedra (Summerson: 1948).
94. **An Altar:** Is any structure upon which offerings such as sacrifices are made for religious purposes. Altars are usually found at shrines, and they can be located in temples, churches and other places of worship (Wood: 1907).
95. **Ziggurats:** (Akkadian ziqqurat) were massive structures built in the ancient Mesopotamian valley, having the form of a terraced step pyramid of successively receding stories or levels (Chadwick: 1992).
96. **A Mastaba:** In the form of a flat-roofed, rectangular structure with outward sloping sides. Mastabas were constructed out of mud-bricks or stone (Hamlin: 1954).

97. **A Throne Room:** Is the room, often rather a hall, in the official residence of the crown, either a palace or a fortified castle, where the throne of a senior figure (usually a monarch) is set up with elaborate pomp-usually raised, often with steps, and under a canopy, both of which are part of the original notion of the Greek word thrones.

98. **Stele:** from Greek: stēlē , also stela is a stone or wooden slab, generally taller than it is wide, erected for funerals or commemorative purposes, most usually decorated with the names and titles of the deceased or living-inscribed, carved in relief (bas-relief, sunken-relief, high-relief, and so forth) or painted onto the slab (Oxford English Dictionary).

99. **Bas- Relief:** Is a sculptural technique. The term relief is from the Latin verb levo, to raise. To create a sculpture in relief is thus to give the impression that the sculpted material has been raised above the background plane (Peter & Penguin: 1989).

100. **A Cylinder Seal:** Is a cylinder engraved with a 'picture story', used in ancient times to roll an impression onto a two-dimensional surface, generally wet clay. Cylinder seals were invented around 3500 BC in the early site of Uruk in southern Mesopotamia (Porada: 1993).

101. **Parmenides of Elea:** Early (5^{th}century B.C.E.) was an ancient Greek philosopher born in Elea, a Greek city on the southern coast of Italy. He was the founder of the Eleatic school of philosophy (Austin: 1986).

102. **Albert Einstein:** (1879 - 1955) was a German-born theoretical physicist who developed the theory of general relativity, effecting a revolution in physics (Whittaker:1955).

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